MACROECONOMIC POLICY IN NIGERIA SINCE 1960

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June 1985

To the memory of my

mother, father, grandmother and stepfather

I certify that this thesis has been composed by myself and that the work contained in it is entirely my own.

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ABSTRACT

The principal object of this work is the appraisal of fiscal and monetary policy in Nigeria over the period 1960 - 81. The thesis concentrates on the use of these policies to achieve the objectives of macroeconomic management with particular emphasis on the financial objectives, namely, inflation and the balance of payments.

Chapter One sets out criteria by which to judge fiscal and monetary policy in the country, given the institutional framework within which policy-making takes place.

The substantive analysis is divided into two parts. The first (and main) part is concerned with the evaluation of macroeconomic policy in general terms. In the field of fiscal policy, the relevance of mainstream theory to Nigeria is examined. In the analysis which follows, essentially microeconomic considerations (such as changes in the tax rates) are specifically ignored. Instead, the focus of attention is on broad aggregates such as the budget balance. Indeed, the overall budgetary policy forms the core of the discussion. Another aspect of fiscal policy that is considered is the determination of total government revenues and expenditures. With respect to the latter, some expenditure hypotheses (for example, 'Wagner's Law' and the 'displacement effect' hypothesis) are tested. In addition, the government's prices and incomes policy is examined.

The analysis of monetary policy is based on the premise that money exerts some influence on the economy and that it is necessary to control its behaviour. Given that an understanding

of the money market is a sine qua non of an effective monetary policy, this market is investigated at length from both the demand and supply sides. The discussion of the actual operation of monetary policy in the country itself centres on the appropriate use of the weapons of monetary management open to the authorities, given the results of the empirical analysis of the money market.

The second part of the analysis singles out the objectives of economic policy with respect to inflation and the balance of payments and discusses policy measures taken in attempting to achieve them.

The general conclusion is that over the review period, macroeconomic policy has been less than successful and that there is room for improvement.

ACKNOWLEDGEMENTS

Many people contributed a great deal to this work : Prof. I.G. Stewart and S.T. Sayer without whose guidance, encouragement and support this thesis could not have been possible; the University of Jos and the Federal Government of Nigeria which financed the project; and other members of the Department, especially Les T. Oxley, who made valuable contributions. In addition Nicky Valente and Jan Bentley assisted me in various ways while Mrs J Gough typed the thesis within an incredibly short space of time.

To all these, I am deeply grateful. However I alone am responsible for all the remaining errors and omissions.

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INTRODUCTION

This study is concerned with fiscal and monetary policy in Nigeria between 1960 and 1981. The analysis will show that macroeconomic policy in Nigeria over this period met with limited success. In particular, the balance of payments and inflation have not responded significantly to policy. Moreover, the influence of external factors on the rate of growth of the economy appears to have dominated that of domestic policy. Three reasons for the relative ineffectiveness of policy are advanced in the thesis. The first is that the structure of the economy inhibits the effectiveness of policy. Secondly, even some tools of policy which could have been utilized with a reasonable degree of success were misapplied. Finally, the country does not appear to have had an overall, consistent macroeconomic policy. These are explained in the text. The remainder of this introductory chapter sets out the objectives of the study, relates it to existing ones, and explains the sequence of the topics treated.

Dramatic changes have taken place in the Nigerian economy since 1960. Predominantly an agriculture - based economy, Nigeria is now highly dependent on import for food and industrial raw materials. From being a leading exporter of palm oil the country is now a net importer of the product; it was once the largest exporter of groundnut but the product ceased to be exported from 1978. These changes were part of a more general transformation of the economy. In 1960, five products - cocoa, groundnut, palm produce, raw cotton and natural rubber - accounted for 74% of the value of the country's exports. By 1981 their share had fallen to 1%. By contrast the ratio of petroleum to total exports rose from 2.6% in 1960 to 98.2% in 1981. Output also

also shows similar striking structural changes.

These changes were accompanied by a number of economic crises. In 1964, the level of foreign reserves fell below the equivalent of four months import bill which was officially regarded as the minimum tolerable level. But in the 1970's it was to fall even lower. The current account was in fact in deficit continuously between 1955 and 1972 inclusive. The balance of payments crisis reached a climax in 1982 when the President sought and obtained the power to ban all categories of imports temporarily - a power which he used immediately in May of the same year. In addition, there was the perennial problem of inflation which averaged an annual rate of 33.7% in 1975. By historical standards, this was a catastrophic figure.

In spite of these developments, few studies exist inside or outside the country on its macroeconomic policy. To some extent, the sparsity of work on Nigeria's macroeconomic policy in the world academic press is understandable: until the late 1970's the country did not have any economic malaise on a scale as large as, say, inflation in Latin America or unemployment/overpopulation in South East Asia. Within the country itself, research topics often take the form of 'the role of this or that in economic development'. In recent years, there is a tendency towards concentration of research efforts in certain fields[1]. Even the few studies that relate to macroeconomic policy deal only with highly specific aspects of the problem. The econometric estimation of relationships is particularly common. Thus, there are a handful of studies on the demand for money which have been described as being in the main amateurish excursions into the

realm of empirical economics (Okigbo 1981, p. 53). Formal studies on important aspects of macroeconomic policy such as interest rate policy are conspicuous by their absence in published form.

These observations serve to highlight a void which this study attempts to fill. The primary objective of the study then is to present a balanced appraisal of macroeconomic policy in Nigeria since independence in a more general framework than hitherto available. Specifically, the study seeks to identify the factors which have constrained or facilitated the effectiveness of fiscal and monetary policy in the country during the review period.

The methodology adopted in this thesis, that is, the analysis of macroeconomy policy in its totality, is superior to the alternative one of a piecemeal approach (which is typical of current research on the country's economic policy) in one important respect. In general there is no one - to - one correspondence between macroeconomic objectives and policy instruments. This is, of course, an obvious fact but it is one that can affect significantly the conclusions of the type of study undertaken in this thesis. A partial approach to policy analysis can take many forms. It may be the examination of particular objectives (e.g. inflation) or of particular policies (e.g. exchange rate policy) or, as is more common in Nigeria, the investigation of particular relationships (e.g. the price elasticity of the demand for import; the effect of government policy on industrial development). The first type ignores the fact that governments typically pursue many objectives simultaneously and that the

achievement of one objective may necessitate the sacrifice of another one (e.g. price stability and growth). The second, on its part, fails to take account of the fact that one policy instrument usually affects more than one objective as well as other instruments. It will in fact be argued in this study that one specific instrument - fiscal policy- influences almost all the objectives of economic policy in Nigeria, including those relating to the balance of payments, inflation and growth. Finally, the third is even more limited than the other two. Industrialization, for instance, is an intermediate objective. Industrialization is often linked to growth or diversification of the economy. The latter objective (the reduction of the dependence of the country on one or a few commodities mainly for foreign exchange or government revenue) is in turn aimed at reducing fluctuations in income which is only one of many objectives of economic policy.

Now that the objectives of the thesis have been clearly delineated one may relate it to existing work.

RELATIONS TO EXISTING STUDIES

Many issues investigated here have been raised elsewhere as the following examples show. The balance of payments has been considered by Onitiri (1970) while inflation has been discussed by Oyejide (1972). Similarly, Phillips (1967, 1968 and 1969) has examined the influence of fiscal incentive schemes on industrial growth; Ajayi (1972, 1974) and Ojo (1976) have done some work on money supply determination; and Tomori (1972), Teriba (1974, 1975), and Akinnifesi and Phillips (1978) have all studied

the demand for money in Nigeria. As such, the present study has got many antecedents. Yet it is fundamentally different from the earlier ones in many respects. First, the earlier studies were conducted in a considerably narrower context than the present one. Onitiri's work on the balance of payments, for example, was a paper presented at a conference on reconstruction and development in Nigeria held in 1968 and was principally concerned with the constraint imposed by the balance of payments on growth. In the same way, Oyejide's emphasis was on the effect of inflation on capital formation. The limited scope of the other examples is self-evident. This work is therefore differentiated by being the first to look at macroeconomic policy in Nigeria in a general context. Thus, the implications of fiscal policy for monetary policy and the balance of payments, the relation between interest rate and monetary policy, and the link between money and the price level are some of the relationships that will be investigated in the study.

Second, the results of the empirical analysis are invariably more reliable than those of earlier ones. There are two reasons for this. First, previous models have been extended by using different or additional variables which has resulted in improved performance of the models considered. Second, there are few, if any, studies that relate to the recent period. This is easily illustrated with the demand for money studies. The latest such study as at the time of writing (Akinnifesi and Phillips 1978) uses data covering the period 1962 - 1975 while many important developments (to be charted in the text) occurred as from that year. Their influence is therefore not captured by the study. In other areas (e.g. import demand), the review period is even

less recent. In addition to the more recent cut-off date, the present study covers a longer review period than earlier ones, thus making possible some econometric tests which were not possible before [2].

Finally, the study contains a number of novel investigations. In this connection, one may mention the following cases. To the best of the knowledge of the author, no-one has ever tested for Nigeria the directions of the causal relationship between the stock of money and the price level. A similar observation applies to the influence of income on government expenditure and the displacement hypothesis.

Having set out the objectives of the thesis and its relationship to earlier studies the final task that remains is to explain its organization.

STRUCTURE OF THE THESIS

In appraising the performance of an entity - be it an individual, firm or government - it is helpful to have some points of reference that is, some standards for judging how far the entity has been successful. In the present case, this entails setting yardsticks by which to evaluate the performance of macroeconomic policy in Nigeria. Chapter 1 is devoted to the development of such criteria. Two sets of criteria are proposed. The first relates to the objectives of macroeconomic policy declared by the government. This, of course, requires specifying those objectives. However, it is possible for the government to declare its commitment to one set of objectives while it pursues a totally different one. As a result, an attempt is made to identify the

objectives actually pursued (as implied by the measures taken). The second set of criteria concerns the feasible objectives of macroeconomic policy in the country. Whether or not an objective is feasible depends on the constraints within which policy making and execution take place. It is therefore necessary to examine the limitations on macroeconomic policy in Nigeria. These have been classified into three: statistical, institutional and political. It is on the basis of these constraints that the feasible objectives are determined.

Following conventional practice, macroeconomic measures are divided into two broad categories viz., fiscal and monetary policy. Fiscal policy is taken up first (in Chapter 2). Like most branches of economic theory, the theory of fiscal policy has been developed within the context of Western, industrial societies (3). However, Nigeria is a prototype of developing countries (Appendix 1). Since it is common knowledge that the two groups of countries - developed and developing - are structurally different, the straightforward grafting of fiscal (or any other) theory from the former onto the latter is inappropriate (Seers 1963 Myint 1964). This provides the rationale for the review of the relevance of conventional or mainstream shortrun stabilization policy to the Nigerian situation as a prelude to the discussion of fiscal policy in the country. An equally important factor that needs to be taken into consideration when evaluating fiscal policy is the influence of the existing political system. The significance of the political system for the present purpose arises from the fact that Nigeria is a federation in which the power of the central and regional/state governments are enshrined in the constitution. With

respect to fiscal policy, it is these constitutional provisions which distinguish a unitary from a federal State. As Adarkar (1933, p. 1) put it, half a century ago, 'A purely administrative province of a unitary system differs from an autonomous or semi-autonomous province of a federation in that the latter has, while the former has not, a more or less untrammelled power of independent legislation in regard to financial matters falling within its competence'. Theoretically then, federalism may produce one of the following situations: the actions of the sub-national governments reinforce federal actions thus making the latter more effective; the fiscal decisions of the lower-level governments run counter to central government decisions and therefore exert a negative influence on the attainment of fiscal policy goals; and, the effects of central government decisions are invariant with respect to the actions of the other governments in the federation. For these reasons, the impact of federalism on fiscal policy is examined by discussing the fiscal system. Also, for various reasons given in the text, the analysis of fiscal policy which follows the fiscal system is confined to the fiscal activities of the Federal Government.

Monetary policy is treated in the following two chapters. Chapter 3 deals mainly with the theory of monetary policy. This deals with the mechanism mechanism of monetary

policy in the country. Following standard practice, the channels of monetary policy are traced by analysing the market for money through the demand side first and then the supply side. The analysis in this part of the study is inevitably empirical, with Nigerian data being used to investigate money demand and supply functions. Finally, given the indeterminate results of the supply side of the exercise, an alternative approach to money supply determination - the balance sheet approach - is used to isolate the various factors which influence the supply of money in Nigeria. The exercise should provide valuable information that will facilitate the actual appraisal of policy which is the subject matter of Chapter 4.

As in the case of fiscal policy, the institutional background plays a central role in the conduct of monetary policy. In the first instance, the monetary authorities can use only those powers conferred on them by the law. Secondly, the structure of the financial system affects the efficacy of these weapons. Consequently, the financial system is described in some detail. The evaluation of monetary policy is organized around the techniques of monetary control conferred on or employed by the Central Bank of Nigeria. The advantage of this approach is that it pinpoints the causes of the success or failure of the particular technique involved. Furthermore, it indicates what measures should be taken to improve the performance of the techniques. However in order to present a balanced picture of the conduct of monetary policy, a critical survey of monetary problems and policy in terms of three phases is undertaken. The conclusion also contains a general assessment of monetary policy over the review period.

So far the evaluation of policy has been approached from the side of the measures taken to achieve the desired objectives. But as indicated earlier, a given measure typically affects more than one objective, just as one objective may be attained with more than one instrument. This suggests that it is possible to reverse the current approach, that is, appraise policy from the side of the objectives. For this purpose, two objectives have been selected on the basis of the discussion in Chapter 1. These are the objectives relating to price stability and the balance of payments. Inflation is the subject of Chapter 5. First the facts to be explained are set out. Then two competing theories of inflation and their relevance to Nigeria are reviewed. The two theories are the monetary and institutional (or sociological) explanation of inflation. Inflation policy in Nigeria is then reviewed in the light of the preceding discussion. Chapter 6 is concerned with the balance of payments. The balance of payments problems of the country are set out (in the form of the behaviour of some key balances) before presenting the measures taken to solve them. Following the approach developed in earlier chapters, the theory of the balance of payments policy is reviewed. Given that most of the measures taken by the government make some implicit assumption about the income and particularly the price elasticity of the demand for import, an import demand function is estimated in order to shed some light on the appropriateness of these measures. A critique of the authorities' balance of payments policies then follows.

The final chapter contains the main conclusions of the study. Appendix 1 provides some useful background information on the Nigerian economy.

FOOTNOTES

1. In particular, studies on the financial system have become a favourite pastime c.f. the strikingly similar studies by Ojo (1976), Nwankuo (1980), Okigbo (1981) and Ojo and Adewunmi (1982).
2. For instance, many earlier studies did not report the Durbin-Watson statistics on the grounds that the number of observations was less than the minimum of 15 for which critical values are tabulated.
3. Marxian economic analysis is still of limited relevance to Nigeria which is more capitalist than some West European or North American countries.

CHAPTER ONE

CRITERIA FOR EVALUATING MACROECONOMIC POLICY

INTRODUCTION

In order to facilitate the appraisal of a policy, it is necessary to have some points of reference or benchmarks. Consequently, the principal objective of this Chapter is to derive some yard-sticks for measuring the performance of macroeconomic policy in Nigeria over the review period.

The discussion is organized along the following lines. One of the simplest ways of assessing a policy is to confront its performance with the objectives set for it. In this sense, a policy is judged to be effective if it achieves its objectives. Using this approach, one may evaluate the performance of macro-economic policy in Nigeria on the basis of how far it has achieved the objectives set by the government. It is therefore necessary to articulate those objectives. This is the task undertaken in Section 1. Like any other government, the Nigerian Government is under pressure from various interest groups in the society. It has to take account of these pressures when setting its objectives In its attempt to satisfy as much of the demands on it as possible, it may declare its commitment to objectives which (a) it has no intention of pursuing or (b) are beyond its means. Consequently, in Section 2, an attempt is made to identify its real objectives by considering some of the measures taken over the years in part-icular circumstances. Then, in Section 4, the suitability of these objectives as criteria for assessing macroeconomic policy in the country is examined. Of course, for an objective to be suitable for this purpose, it must be feasible in the first

instance. In turn, what is feasible depends on the institutional settings in which policy is formulated and executed. In particular, the constraints within which the authorities operate affect to a great extent their power to realize specific objectives. Such constraints are reviewed in Section 3 before determining the suitable objectives in Section 4.

It will be argued that the use of objectives to appraise policy alone is inadequate, hence the examination of possible alternative criteria in Section 5 which is followed by a summary of the discussion.

1. DECLARED OBJECTIVES OF MACROECONOMIC POLICY IN NIGERIA

The normal objectives of macroeconomic policy are normally thought to be concerned with employment, prices, the balance of payments, and growth. Nigeria appears to have adopted all four as the following account will show.

On the recommendation of the World Bank economic mission to Nigeria whose report was published in 1955 (IBRD, 1955), the National Economic Council was set up late in 1955 to provide a forum for the various governments to discuss development policies and common economic problems (Nigeria, 1970 p. 7). Early in 1959 this Council decided that 'a national development plan be prepared for Nigeria with the objective of the achievement and maintenance of the highest possible rate of increase in the standard of living and the creation of the necessary conditions to this end, including public support and awareness of both the potentials that exist and the sacrifices that will be required'

(Nigeria, 1970 p. 10). In his independence budget speech of 1960, the Federal Minister of Finance reaffirmed that all the financial and economic policies of the Federal Government would be directed at this objective. He then went on to frame a ten-point programme towards its realization. The relevant items for the present purpose are to: (i) maintain confidence in the value of the Nigerian currency and to maintain reasonable stability in wages and prices; (ii) continue to encourage the growth of industry and further development of Niegeria's internal resources, and (iii) make effective arrangements for the provision of the funds required to finance development in Nigeria both by mobilizing domestic savings and by attracting capital from overseas. (CBN Report 1960, pp 13 - 14). The First National Development Plan, 1962 - 68 (FNDP) accepted this objective by declaring that in preparing the Plan one of the goals of the government was to make the economy 'grow as fast as possible' (Nigeria, 1962, p. 21).

It can be seen from these statements that right from its inception as an independent nation, the country has made growth, price stability, and the balance of payments the objectives of its economic policy. The third objective arises from the following consideration. The level of external reserves 'is in many ways the very heart and core of confidence in our currency for that confidence will only be maintained so long as we, as a nation, maintain a level of external reserves which inspires confidence, both internally and overseas, in our ability to meet our obligations'. (1962 Budget, p. 8). Foreign exchange reserves, as is well known, depend on the balance of payments.

Subsequent official documents re-iterated government's commitment to these objectives while adding a fourth-full employment. Until the last years of the review period, particular emphasis was placed on growth and price stability. For instance, the Second National Development Plan (SNDP) 1970 - 74 (subsequently extended by a year), endorsed the growth objective when it stated that 'Nigeria must bend its energies towards the achievement of the most rapid rate of economic development possible' (Nigeria 1970, p. 32). It regards this as one of the five principal national objectives of the country. In accepting this objective, the Third National Development Plan 1975 - 80 (TNDP) states that 'In Nigeria as in most other developing countries, development policy must perforce be directed at three fundamental objectives: (a) economic growth and development; (b) price stability, and, (c) social equity'. (Nigeria, 1975, p. 33). But 'The primary objective of economic planning in Nigeria is to achieve a rapid increase in the standard of living of the average Nigerian'. (Nigeria, 1975, p. 29).

On inflation one is told in the SNDP and TNDP that 'Since independence, Nigeria's monetary policy has been geared towards three main objectives' one of which is the 'maintenance of confidence in the Nigerian currency through measures to stabilize domestic wages and prices'. (Nigeria, 1970 p. 68; Nigeria, 1975 p. 18). The two plans also identify three objectives of fiscal policy, one of which is to 'maintain reasonable economic and price stability in the face of inherent inflationary pressure' (Nigeria, 1970, p. 68; Nigeria, 1975, p. 16). In the mid-1970's the price objective seemed to have been elevated to the top of government's scale of declared objectives as both monetary and

fiscal policies were assigned to this objective: 'The main objective of monetary policy during the Third Plan will be to control inflation' and 'fiscal policy should seek mainly to reduce inflationary pressures' (Nigeria, 1975, p. 34).

The full employment objective was formally adopted for the first time in 1970 as one of the five national objectives. This objective sought to make Nigeria 'a land of bright and full opportunities' which is interpreted as 'an atmosphere of expanding opportunities for full employment' because 'Full employment of resources, especially of the labour force, is the necessary policy objective for an economy dedicated to rapid growth' (Nigeria, 1970, p. 32). The complete set of the principal national objectives as enunciated in the SNDP (p. 32) and re-affirmed in the TNDP (p. 29) are 'to establish Nigeria firmly as (i) a united, strong and self-reliant nation; (ii) a great and dynamic economy; (iii) a just and egalitarian society; (iv) a land of bright and full opportunities for all citizens; and (v) a free and democratic society'.

In order to achieve these long-term objectives, specific short-run objectives were set for fiscal and monetary policy. These are (a) increase in per capita income, (b) more even distribution of income, (c) reduction in the level of unemployment, (d) increase in the supply of high level manpower, (e) diversification of the economy (f) balanced development and (g) indigenization of economic activity (Nigeria, 1975, p. 29). From these are derived the conventional objectives of macroeconomic policy set out above. But other less orthodox objectives that are peculiar to developing countries can be derived. These include the

diversification of the economy, balanced development and indigenization. Others which have been pursued over the years are the provision of development finance and the strengthening of the financial system through the operations of the central bank (1).

In principle, it should not be difficult to apply the suggested criterion of comparing performance with objectives. This is because the government usually expresses its objectives in quantitative terms (Those for the four traditional objectives are given in Section 4). Even for apparently non-quantifiable objectives, proxies can be found. Diversification of the economy easily comes to mind in this respect. Officially, the term refers to the structure of exports, and measures of export concentration or diversification are available (2). Similarly, one may use number of pupils per teacher, per capita hospital beds, number of kilometres of tarred roads per square kilometre and so on in each state as proxies for even development. But there are two reasons why the use of this criterion alone is inadequate. There are practical difficulties in measuring the performance of the economy, i.e., reasonably accurate measures of the relevant macroeconomic aggregates do not always exist. Furthermore, the criterion is silent on whether the set objectives are attainable, given the circumstances surrounding policy making and execution. This suggests that it is necessary to distinguish between desired and feasible objectives. This is done after discussing the limitations of policy making. Also, one may want to know if declared objectives diverge from actual objectives - the subject of the next section.

2. OBJECTIVES IMPLIED BY THE POLICY MEASURES

It is possible for the government to pay lip service to one objective while it is not really interested in it. This may be done in order to placate some pressure group. To a certain extent, the objectives actually pursued by the government can be inferred from its policy measures in given circumstances. This is, however, not an easy task. In the first instance, economic theory does not provide unambiguous, universally valid measures for securing any given objective(3). Also, there is the possibility of a conflict between the objectives (e.g. price stability and growth) which arises when a particular policy affects more than one objective in the opposite directions. Given the absence of consensus on the set of policies necessary to achieve a given objective, it is difficult to rank the government's objectives by merely examining the policies pursued. As a result, the following exercise is tentative.

2.1 GROWTH

This is one objective which one can say with confidence was pursued by the government in earnest. This is evident in the various development programmes executed since 1955. The planned capital expenditure of the Federal Government alone rose from ₦825 million under the First Plan 1962 - 68 to ₦42,000 million under the Fourth Plan 1981 - 85. Moreover, as the table below shows, a large fraction of the expenditure is on economic services. This fraction has been rising since 1970. In Ch. 2 it will be shown that actual capital expenditure displays a similar trend.

TABLE 1 : SECTORAL DISTRIBUTION OF PLANNED CAPITAL EXPENDITURE OF THE FEDERAL GOVERNMENT UNDER THE NATIONAL PLANS

SECTOR \ PLAN	FIRST	SECOND	THIRD	FOURTH
ECONOMIC	72.3	63.7	66.8	69.6
SOCIAL	16.5	13.0	17.8*	19.9
DEFENCE & ADMINISTRATION	10.7	21.6	15.4	10.5
TRANSFERS (FINANCIAL OBLIGATIONS)	0.5	1.7	-	-
TOTAL %	100.0	100.0	100.0	100.0
TOTAL (₦ MILLION)	825	1,100	26,165	42,000

SOURCES: FNDP, p. 51; SNDP, pp 273, 274; TNDP, pp 348, 349; and Central Bank of Nigeria, Annual Report, 1981, p. 4

* includes environmental development, i.e. water supply, sewerage, drainage and refuse disposal, town and country planning, and co-operative and community development

Another indication of the commitment of the government to growth is the shift in the composition of imports in favour of producer goods - capital equipment and raw materials. The policy of stilupating what percentage of total bank credit should go to the various sectors, with the production sector being given the lion share is an additional indicator(4) .

2.2 THE BALANCE OF PAYMENTS

Again, one may say that this is an objective that was pursued vigorously by the government. For instance, when, in 1964, the level of foreign reserves fell below the minimum set by

official policy, the government took positive steps towards rectifying the situation (5). These included increases in the customs duties on a wide range of imports; other quantitative restrictions on imports (e.g. quotas); and the setting up of the Official Committee on Balance of Payments to study the problems of the balance of payments and to make recommendations (6). The balance of payments crisis also prompted the Central Bank of use for the first time its main instrument of monetary control: credit guidelines. Other measures taken by the Central Bank in that year with the ultimate objective of correcting the balance of payments problem include the exclusion of some assets from the list of reserve-eligible assets (thus effectively raising the reserve requirements) and the upward revision of interest rates (CBN, Report, 1965, p. 10; also Ch. 4).

Again, as the level of reserves approached the official minimum in 1978, the authorities took certain drastic actions to curtail the reserve drain. Many items of import were banned while others were placed on licence and a comprehensive import supervision scheme was introduced, all with the aim of reducing the flow of imports (CBN, Report, 1978, p. 6 and see Ch. 6). In the same year, the government succeeded in reducing the level of its expenditure for the first time in many years (see Ch. 2). Finally, as a last resort, all categories of imports were temporarily suspended in May 1982 under the Stabilization Bill of that year when foreign reserves in relation to the flow of imports fell to their lowest level ever following a record deficit in the balance of payments sustained a year earlier.

Having demonstrated the degree of the Federal Government's commitment to the balance of payments objective, it is also necessary to point out that the objective differs from the others in one respect : it also serves as a constraint on the government. There is a limit on the extent to which the balance of payments can deteriorate without reducing international confidence in the ability of the government to run the affairs of the country. It is unlikely that any rational government would allow its country's balance of payments seriously to deteriorate before taking corrective measures. Consequently, the government does not have much choice as far as the balance of payments is concerned. It must either deflate or permit its currency to depreciate.

2.3 PRICE STABILITY

The government appears to have adopted an ambivalent attitude towards this objective. On the one hand, its statements on policy give the impression that it is dedicated to achieving a reasonable degree of price stability. On the other hand, its actions indicate that price stability is an incidental objective. An indication of this came in the first few years of the First Plan. It was expected that 50% of the total projected public sector investment would be financed by foreign capital (CBN, Report, 1964 p. 11, also FNDP). In the event, this expectation proved to be too optimistic. Foreign capital accounted for only 6.7% of the total capital expenditure in the first two years (CBN, Report, 1964, pp. 11 - 12) and the situation did not improve even in later years when the country was thrown into a political turmoil. As current and capital expenditures grew rapidly while

revenue grew at a much slower rate, a widening overall budget deficit emerged. This deficit was 'financed by drawing upon past and current savings of the economy, foreign assistance, and increasingly, by borrowing from the banking system ... At the end of 1964, internal public debt totalled ₦200.6 million as against ₦89.2 m at the beginning of 1962. More than 75% of these borrowings was derived from inflationary sources ... it is dangerous for the rate of monetary expansion to out-pace that of economic growth as it has in the past three years' (CBN, Report, 1964, pp. 12 - 13).

The policy of deficit-financing through inflationary means was continued until 1971 and resumed in 1975. In order to achieve this, the Treasury Bill Act was amended a number of times. The original (1959) Act had fixed the limit of Treasury bills as a percentage of estimated Federal Government revenue at any point in time at 10% (CBN, Report 1960). By 1970, the limit had been raised to 150% of the estimated revenue retained by the Federal Government plus the gross revenue of the states (CBN, Report, 1970, p. 54). In addition, a short term government debt instrument called Treasury certificates was introduced in 1968, thus enhancing the borrowing ability of the government. Despite the warnings from the Central Bank in the 1960's about the potential inflationary consequences of the Federal Government's fiscal operations, and even when the annual rate of inflation reached two digits in the 1970's, the government persisted in expanding its expenditure at a rapid rate (7). Furthermore, it objected to the use of a potentially effective anti-inflation weapon by resisting increases in the rates of interest (8). Thus,

'the monetary measures in use since 1960 have been the provision of "cheap money" to finance government capital expenditure and the aiding of investment financing in the private sector' (Nigeria, 1970, p. 14). From this one may infer that the growth objective is ranked higher than the price objective.

A similar observation applies to the relationship between the price and balance of payments objectives. The relative insignificance of the problem of inflation vis-a-vis that of the balance of payments was demonstrated in the early and late 1970's. In the two periods the balance of payments was in deficit while the inflation rate, at 10% or higher, was considered unacceptable (9). Yet, the government took steps to restrict the availability of goods and services by imposing quantitative controls on imports and introducing or maintaining foreign exchange controls. Finally, given that the balance of payments is a form of constraint on the government, it has to be ranked higher than the price objective.

To some extent, the relative insignificance of the price stability objective, especially in the earlier years of the review period, is understandable. In many countries of the world, there has been a marked change in emphasis within the goals of macroeconomic policy since 1960. Excluding countries in the Western Hemisphere, inflation did not pose a serious problem in any major country in the 1960's. Nigeria is not an exception to this general observation. Until 1969, the annual rate of inflation was below 10%. In those circumstances, it was possible for the government to relegate the price stability objective

which has no intrinsic value to the background. But the 1970's witnessed the acceleration of the inflation rate to heights previously unknown. The earlier comments about inflation being an incidental objective therefore apply more to the period since 1970 than to the preceding one.

But even in the later period some measures were taken to achieve some degree of stability in prices. Some of these measures will be reviewed in Ch. 6. Here, it will be noted that a price control board was set up in 1970 to fix and enforce the prices of a wide range of commodities. Then, in 1975, an Anti-Inflation Task Force was established. Also, between 1973 and 1976 when inflation was the only major problem in the economy, most of the measures were directed at reducing the rate of increases in prices. Nevertheless, the general conclusion that the price stability objective occupied a subordinate position to that relating to the balance of payments and growth still stands.

2.4 EMPLOYMENT

It is tempting to think that since the government was dedicated to accelerating the rate of growth of the GDP it accorded the employment objective a high priority. This is not necessarily so. The view prevalent in less developed countries that a nation cannot be regarded as developed unless it has a large industrial base (Ekundare , 1973, p. 260) ensures that emphasis is placed on industrialization. In Nigeria this has been given practical expression in the adoption of an import-substitution development strategy which is described briefly in Ch. 6. The effect of this is that expenditure on the industrial sub-sector

dominates all other categories of expenditure on the economic sector. But it will be explained in App.1 that the industrial subsector is relatively insignificant with respect to employment. Agriculture which employs the bulk of the labour force was relatively neglected. Moreover, over the years, few measures explicitly designed to increase employment were taken. Finally, the magnitude and changes in the employment problem are not known (see Section 3.1 below). For these reasons, one may say that employment was not a paramount objective of macro-economic policy in Nigeria.

2.5 OTHER OBJECTIVES

These other objectives are sometimes referred to collectively as the development objectives. They are different from those considered above in the sense that the former are not regarded as the ultimate objectives. Rather, the belief is that the attainment of these intermediate objectives will aid the achievement of the desired, final ones. This is implicit in the assertion that 'The basic objective of all monetary and financial policies must at all times be directed to facilitate the economic development desired' (Nigeria, 1965, p. 4). As such, the development objectives may be illustrated with reference to the functions expected to be performed by the institution primarily charged with the responsibility for monetary and financial policies, viz, the Central Bank of Nigeria.

Realizing the undesirable consequences for policy of the under-development of the financial structure, the Centre Bank of Nigeria, like many African central banks [10], has been given

the responsibility for promoting the growth of financial institutions. The Bank is expected to play a leading role in creating and nurturing a market for government and private debt instruments (for example, through the issue of government securities and the establishment of stock exchanges). The Bank is also expected to set up development finance institutions (e.g. the Nigerian Industrial Development Bank).

The Central Bank was also required to aid the 'development of the banking habit' through a number of measures. These include the proper supervision of the commercial banks to ensure that they behave in a way that is consistent with government policy, including the strengthening of public confidence in them. Apart from the routine examination to eradicate malpractices, the Central Bank: can refuse any commercial bank to open new or close existing branches; determines the minimum number of rural branches a bank must open before expanding banking facilities in urban areas; and encourages non-price competition among banks.

Finally, the Central Bank is expected to provide development finance to the government by issuing and underwriting long-term government stocks.

These objectives, together with those relating to growth and the balance of payments may be said to have ranked high on the government's scale of priorities. But given these stated and implied objectives, it still remains to be determined whether they are appropriate for use as criteria for assessing policy. A necessary condition for any objective to be suitable as a criterion

is that it must be set at a realistic level, i.e. it must not be impossible or too easy to achieve, given the prevailing conditions. In Nigeria, the policy maker is faced with a number of constraints which help to reduce the effectiveness of any policy measure. In the next section, some of these limitations on policy are reviewed.

3. CONSTRAINTS ON MACROECONOMIC POLICY IN NIGERIA

For analytical purposes, these constraints may be divided into three types. These are statistical, structural and political and are considered in that order.

STATISTICAL DEFICIENCIES

Like most developing countries, Nigeria suffers from lack of reliable, timely data on many economic aggregates. For the present purpose, the worst affected are employment and growth although price and balance of payments statistics are also faulty.

There is no measure of total employment or unemployment in Nigeria. In the first instance, the population of the country is not known in spite of the fact that six censuses have been conducted since 1911. The first normal census was held in 1962 but it was scrapped because of the controversy which it generated. In 1963 another census was held. Although the results were finally accepted by the Federal Government the academic opinion is that the figures were inflated for political reasons (Aluko, 1965; Ekanem, 1972; Adepoju, 1983). The last census was held in 1973 but it was cancelled because the nation could not agree on the distribution of the population. If the total population

is not known, it is then not surprising that the size of the labour force is also unknown. Consequently expressions such as 'the rate of unemployment' are meaningless. Besides, the concept of unemployment in Nigeria is very vague because of the existence of 'disguised' unemployment in which labour is permanently engaged in low-productivity, low-remuneration activities such as subsistence farming and street hawking (Kirkpatrick and Nixson 1976, p. 176). Thus, meaningful measures of unemployment do not exist.

The valuation of output of Nigeria is a particularly difficult task. The sources of this problem are well documented in Prest and Stewart (1953), Okigbo (1962 and 1963) and Eke (1966) and surveyed in Appendix 1. In a nutshell, the problem centres around agricultural production other than for exports (i.e. crops grown mainly for home consumption) which, by definition, is not traded. Estimates of agricultural output in general are based on an assumed output per man or marketing board purchases. Clearly, the former estimates are subject to a wide margin of error because output per man is highly subjective, its rate of growth over time is not known and the population itself is not known for certain. Yet, the contribution of this subsistence production to total agricultural output is thought to be well over 90% (Aboyade, 1969). In turn, agriculture has accounted for between 25 to 70% of total output. Apart from the financial and mining sectors of the economy, the contributions of other sectors to total output are more or less difficult to measure.

Price statistics are also defective. The main

problems concern the weighting system used in their compilation and their coveraged both in terms of the products covered and geographical spread. Food, for instance, accounts for 45.5% of total weights of the items covered. Similarly, the data relate mainly to nine urban centres, with Lagos being given a weight of 543 out of 1000. Although weighting and coverage are universal problems of the construction of index numbers, the solutions adopted in Nigeria tend to lead to a higher than normal degree of error because of the bias in favour of food on the one hand and Lagos on the other.

Finally, records of many aspects of government fiscal operations are unavailable. These and other statistical limitations in Nigeria are elaborated on in Appendix 1.

A direct implication of these problems is that the government cannot tell with a reasonable degree of confidence the position of the economy at a point in time with respect to many key macroeconomic variables. This situation renders the formulation and appraisal of policy particularly difficult. The formulation of sound policies requires some form of forecasts of the future values of the relevant variables. This, in turn, requires some knowledge of the current and past values of those variables. Where the available data are not reliable, this creates a problem. As an illustration, consider the desire to maintain some degree of price stability. Using a simplified quantity theory of money model in which velocity is constant, this implies striking a balance between the rates of growth of money and output. When the latter cannot be measured reliably, the chosen rate of monetary

expansion may be inappropriate so that the desired degree of price stability cannot be realized. Moreover, in evaluating the impact of a given policy, it is necessary to have an idea of the values of the variables which it is expected to affect both before and after the policy has come into effect. In the present circumstances those values are not known for certain, even after allowing for a reasonable length of time.

The untimeliness of data raises another kind of problem. At the time the data on the relevant variables become available the situation may have changed. Policies based on the current data may produce de-stabilizing consequences. The simplest example concerns the institution of expensionary measures when contractionary ones are desired. Finally, the untimeliness of the statistics has the effect of increasing the lags in the effect of policy as identified by, say, Johnson (1962).

Statistical deficiencies serve to increase the uncertainty surrounding policy making as well as to raise the probability of discretionary policy turning out to be destabilizing. The use of imperfect information to conduct policy is therefore a limitation on the ability of the government.

3.2 STRUCTURAL LIMITATIONS

The structure of a developing economy differs markedly from that of a mature one in many respects. First, there is the predominance of primary production together with a correspondingly small manufacturing sector in the former. This has some implications for economic policy. It is now standard proposition

that the price elasticity of the demand for primary products in the world markets is considerably lower than that for manufactured goods. Also, the response of supply to changes in demand, especially in the case of agricultural products, tends to be sluggish in a developing economy. This is definitely true of tree crops with long gestation periods (e.g. cocoa, rubber and oil palm). Consequently, it is difficult to improve the balance of payments position in the shortrun through measures that operate by raising export supply. As will be shown in the next chapter, it is equally difficult to expand domestic production through shortrun fiscal policy.

Another important feature of an underdeveloped economy is the absence of significant linkages among the sectors. In terms of an input-output table, many cells are empty. The best example is the relationship between the mining sector and the rest of the economy. It will be emphasized in the next chapter that in Nigeria this sector is virtually independent of the others. It is not known for using the inputs of other domestic sectors and neither do the other sectors use its output to any appreciable degree. The same observation, mutatis mutandis, applies to the agricultural sector. Since Nigeria is an agricultural country one would have expected that the sector would provide the manufacturing sector a large fraction of its raw materials. In reality, the opposite is the case: the share of imported in total raw materials cost is approximately 75% (CBN, Report, 1980, p. 18). Domestic output of agriculture is consumed mainly as final products. A consequence of the absence of strong linkages among the sectors of the economy is that the government cannot confine its activities to one sector and expect that sector to transmit

the effect of its policy to the rest of the economy. For example, the government cannot use credit availability to influence the level of activity in the agricultural or distribution sector. This example also shows that the imperfection of the financial system (discussed in greater detail in Chs. 3 and 4) is a limitation on the effectiveness of policy.

Finally, it may be added that it is not only the manufacturing sector which depends heavily on imports. All sectors which require capital equipment (other than the rudimentary implements such as hoes and cutlasses) have to import these goods. Thus, tractors and other mechanized farm equipment and raw materials such as animal feeds and fertilizers are imported. Transport and communications equipment are a few of the products that are entirely imported. Measures that only increase aggregate demand may produce disappointing results.

3.3 POLITICAL CONSTRAINTS

This problem may take one of two forms. On the one hand, there is the problem created by federalism and, on the other, a conflict may arise between two or more institutions involved in policy making.

Nigeria is a federation and the relationship between the central and the lower levels of government is a potential source of conflict. This possibility may be illustrated with the changes in federal - state financial relations. The country was administered as a strictly unitary state until 1951 when a quasi-federal constitution was introduced. In 1954 a truly federal constitution

was adopted. This resulted in the progressive enlargement of the powers of the constituent regions at the expense of those of the Federal Government. The authority of the Federal Government was confined to items on the exclusive and concurrent lists while the regions were given residual powers as well as authority over items on the concurrent list. In practical terms, the states assumed the basic responsibility for economic development while the central government contented itself with infrastructural development, transport and communications. Thus, in 1955, the Federal and each of the regional governments embarked upon separate development plans. In order to enable the regions to carry out their functions, their financial powers were correspondingly enlarged. The various fiscal review commissions (see Ch. 2) helped to erode the financial powers of the Federal Government. The implication of this development for the present purpose is that stabilization policy powers became diffused, thus creating the problem of ensuring that the various governments behaved in a way that was conducive to the achievement of national goals. The suspension of the constitution and the declaration of a state of emergency in 1966 by the new military regime removed this potential source of conflict temporarily. But the end of the war in 1970 saw its re-emergence : the states won back most of their powers in the 1970's decade(11).

The second facet of the political problem is the relationship between different departments of government, especially that between the Central Bank and the Ministry of Finance. This issue is sufficiently important to justify a separate treatment which is available in Ch. 4. Here it should be noted that the Bank does not act independently of the Ministry of Finance. For

instance, it cannot change interest rates which are fixed by the Treasury. Neither does it have control over its assets, especially the amount of government securities which it holds.

Having considered the objectives of the government and the limitations on its ability to achieve them, the next task is to consider the suitability of these objectives as criteria for assessing its performance.

4. THE OBJECTIVES AS CRITERIA

As stated at the beginning of this chapter, an obvious set of criteria is the objectives set by the government. The suitability of each of the four main objectives for use as yardsticks for measuring the performance of macroeconomic policy in the country is examined below. Then some plausible alternative yardsticks are presented.

4.1 OUTPUT

The target minimum rate of growth of the economy over the period covered by the first National Development Plan (1962 - 68) is an average of 4% compound. Under the Second Plan, 'In real terms, the economy is projected to rise from the negative of 7.6% fall in the gross domestic product in 1967 - 68, through the lowly .9% of 1968 - 69, reaching, by 1970 - 71, the pre-war average level of 4.7%. Henceforth, the real rate of growth is expected to accelerate to 6.3% in 1971 - 72, 7.9% in 1972 - 73 and 9.5% in the Plan's terminal year, 1973 - 74'(Nigeria, 1970, p. 46). Then, in the Third Plan, 1975 - 80, it was stated that 'it is the Plan's objective to raise the gross domestic product of Nigeria by about

9 per cent per annum in real terms' (Nigeria, 1975, p. 29).

From this it is clear that quantitative targets have been set in respect of the growth of the economy over time. The question that arises is whether these targets were realistic in the light of past trends and the prevailing economic conditions and therefore could be used as criteria for judging the performance of policy. In the table below, the target and actual rates of growth of the economy for the period 1962 - 79 are set side by side. But for the interruption by the civil war (1967 - 69) and the political crises that preceded it (1966), the first Plan target of 4% would have been realized as the target was exceeded in each of the years before 1966. In the event, the compound annual growth rate of the economy between 1962 and 1968 turned out to be -3.6% compared with the target of 4%. However, it is still true that the original target was a bit pessimistic. The plan document itself points out that the average annual rate of growth of the economy in the previous ten years was 3.9% (p. 21). It is therefore surprising that a development plan whose aim was to accelerate the rate of economic growth should aim at only 4%.

Except for the minor exception of 1972, the Second Plan target was exceeded in each year and on an average basis by a wide margin. The compound annual growth rate was 12.4% compared with the target of 5.9%. The wide divergence of actual from target rates in this case was due to the effect of the cessation of hostilities on the economy which could not have been predicted reasonably accurately. The sector which was worst hit by the war and which grew most rapidly thereafter was the mining sector. This

TABLE 1.2 : PLANNED AND ACTUAL RATES OF GROWTH OF THE ECONOMY (PERCENTAGE RATES OF GROWTH OF CONSTANT PRICE GDP

YEAR	TARGET	ACTUAL	YEAR	TARGET	ACTUAL
1962	4	4.2	1971	6.3	18.4
1963	4	8.8	1972	7.9	7.3
1964	4	4.3	1973	9.5	9.5
1965	4	6.8	1974	NONE	12.0
1966	4	-3.2	1975	7.2	-2.4
1967	4	-15.5(?)	1976	8.5	10.5
1968	4	-1.1(?)	1977	9.8	6.7
1969	NONE	26.0(?)	1978	10.6	-5.6
1970	4.7	30.8(?)	1979	11.5	5.9

SOURCES : FIRST, SECOND AND THIRD NATIONAL DEVELOPMENT PLANS; FEDERAL OFFICE OF STATISTICS 1 & 3

Notes: (1)The basis for the calculation of the FOS series of national income was changed in 1973 which resulted in the upward revision of the earlier estimate for that year by ₦300m. Consequently, the growth rate shown for 1971 - 73 is taken from TNDP, p. 21 which uses a consistent series covering those years.

(2)National income estimates for 1967, 1968 and 1969 exclude data for the three Eastern states where the civil war was fought. The area also produced the bulk of the country's crude oil then. The resumption of normal economic activities, the increased production of oil and the inclusion of the data covering the Eastern states, all contributed to the unusual growth of the GDP between 1969 and 1972.

contributed considerably to the growth of output from 1969.

As under the First Plan, the target rate of growth was not attained under the Third Plan. Planned average annual rate of growth was 9% but the actual rate was only 2.4%. Again, the erratic behaviour of the mining sector is largely to blame.

Thus, non-controllable factors contributed to the achievement of the growth objective under the Second Plan and the failure to realize it under the First and Third Plans. Political instability was mainly responsible for the earlier failure of policy while, as seen in App.1, the behaviour of the GDP from 1970 was influenced heavily by the output of crude petroleum. It will be shown that the level of activity in this sector was largely insensitive to domestic policies. It is therefore not proper to attribute the changes in the GDP wholly to government policy. Furthermore, there is the issue of the unreliability of national income statistics explored in some detail in App.1. Owing to the limitations of output statistics, a difference in the values for any two years cannot be taken directly as representing the actual change between those years. One of the figures may be more accurate than the other in which case the time difference is under- or over-stated.

What is being suggested is that the growth of output is not a reliable basis for assessing macroeconomic policy in Nigeria. This arises from the statistical limitations and, to some extent, the difficulty of separating the effects on output from those of exogenous or uncontrollable factors. Moreover, growth is more of a longterm objective than a short-term one whereas this study

is concerned with short-term stabilization policy.

4.2 EMPLOYMENT

Under the Second Plan the employment target was set at 'full employment' but it was revised downward to a 'reduction in the level of unemployment' under the Third Plan. From the discussion in Section 1, it is even easier to dismiss employment than it is to discount output as a suitable yardstick for appraising the performance of policy in Nigeria. The objective itself has been expressed in a very vague manner and this is not surprising in view of the unavailability of any meaningful employment statistics in the country. Even if one were to obtain all the relevant statistics, conclusions regarding the effects of policies designed to reduce the level of unemployment would still be tentative since there is no satisfactorily unique definition of employment.

Another consideration relates to the nature of the unemployment phenomenon in Nigeria. As in other countries, there are great variations from state to state, although in Nigeria there is little information on the magnitude of the variation. Qualitative evidence suggests that unemployment is more serious in the southern states (particularly Lagos and Imo) than in the extreme northern states (e.g. Sokoto and Borno). The problem is accentuated by labour immobility. What makes the situation in Nigeria unique is the fact that labour immobility is encouraged by official policy (Eze, 1971, p. 89). State administrations prefer to offer jobs to applicants from their states to recruiting people from other states who may be better qualified. In terms of promotion,

preference again is given to indigenous civil servants. Then, until 1978 when the Federal Government made the practice illegal, citizens of one state were not normally given pensionable appointments in other states, i.e. they were treated as 'foreigners'. This discrimination also extends to the private sector. State administrations often apply pressure on private sector employers to give preferential treatments to applicatants indigenous to their states in hiring labour.

A second aspect of the unemployment problem is the existence of a severe shortage of certain categories of labour side by side with general unemployment (Nigeria, 1975, p. 29). After reviewing the situation, Eze has concluded that the problem is not easily amenable to short-term macroeconomic policy. According to him, 'Short-term fiscal policies can help but the main problem is socio-political and at the same time one of long-term growth' (Eze, 1971, p. 89).

For these reasons it is concluded that employment or unemployment is an inadequate criterion for judging the performance of macroeconomic policy in Nigeria. This leaves prices and the balance of payments which are considered together below.

4.3 THE FINANCIAL OBJECTIVES

As indicated earlier, the authorities did not regard inflation as posing a serious problem until 1970. The acceleration of the inflation rate from -0.4% in 1968 to 10.0% in 1969 and 13.8% in 1970 and further to 16% in 1971 prompted the institution of the measures that will be discussed in greater detail in Ch. 5. In

1975, a target rate was declared for the first time. It was stated in the Third Plan that 'With regard to inflation, an equally determined and sustained effort will be made to ensure that the annual rate of increase in the general price level does not exceed the 6% indicated in the macroeconomic projections (Nigeria 1975, p. 33). But in the light of subsequent developments within the economy, this target was reduced to 'under 10%' in the 1976/77 budget. The actual rates of inflation are compared with the target below.

TABLE 1.3 : RATES OF INFLATION (ANNUAL) IN PERCENT

	ACTUAL	YEAR	ACTUAL	TARGET (MAX)
1970	13.8	1975	33.7	6
1971	16.1	1976	24.3	10
1972	2.6	1977	19.3	10
1973	5.7	1978	18.7	10
1974	12.5	1979	11.1	10
		1980	11.4	10
		1981	20.9	-

SOURCE: IMF, INTERNATIONAL FINANCIAL STATISTICS YEAR BOOK 1984; FEDERAL MINISTRY FINANCE, 1976 - 77 BUDGET

The target, of course, was never achieved. Given the past trend, the target was neither too ambitious nor too pessimistic. This objective therefore constitutes a usable measuring rod for judging the performance of policy.

With respect to the balance of payments, it has been an official

policy since 1962 to 'aim at a minimum level of foreign exchange reserves equal to the cost of the nation's import bill for four months' (1962 Budget). However, the view taken here is that this is not a practical criterion. In the first place, the target is too low since it is only in exceptional circumstances that it will not be attained. Second, it provides no guide for policy if it is attained as it was most of the time. Finally, the target is rather arbitrary as it bears no logical connection to past records or trend. Nevertheless, the state of the balance of payments is a useful indicator of the effectiveness of policy.

The difference between the real objectives (output and employment) and the financial ones (prices and the balance of payments) in terms of the present exercise is that data on the latter are much more reliable than those on the former although, in absolute terms, neither set of data can be regarded as wholly reliable. Nonetheless, it makes sense to talk about the rate of inflation and the magnitude of the deficit (or surplus) in the balance of payments as it never does with respect to, say, unemployment. Changes in these variables tend to have effects which are more observable than changes in output, for example. Furthermore, as noted earlier, the balance of payments is a sort of constraint on the government. This leads to the conclusion that, of the four principal macroeconomic objectives, only two - those relating to the balance of payments and prices - can be used meaningfully to appraise policy in Nigeria.

But this does not mean that the other objectives are completely irrelevant. Although one cannot measure the impact of policy on

them, one cannot say they are unaffected by it. As should be clear from the discussion in Section 1 and will be demonstrated further in Ch. 2, the authorities were pre-occupied with accelerating the rate of growth through policy measures. This fact suggests that one should be careful about criticising them for taking inappropriate measures against, say, inflation or the balance of payments since the other objectives could have been placed on a higher scale than the financial ones.

The use of objectives constitutes the first of two sets of criteria for appraising policy. The other set is taken up presently.

5. ALTERNATIVE CRITERIA

The suggested standard for judging policy outlined above is to confront performance with objectives. A statement can then be made as to whether or not macroeconomic policy has been effective. For instance, as seen above, the inflation objective may be said to have been unattained and policy was therefore ineffective.

However, the main concern of this study is with why an objective was or was not attained and the suggestion of possible improvements to policy. This involves a critical examination of the policies pursued which is the subject matter of Chs. 2, 4, 5 and 6. It is in this connection that the second set of criteria that is proposed here will be applied. Basically, these yardsticks attempt to answer the following question: Could the government have performed better in the situation in which it found itself?

The ideal criterion would be one which would measure the extent to which the government, through its fiscal and monetary policy, made the economy behave better than otherwise. For example, with regard to the price stability example, this criterion would compare the actual rate of inflation with the rate that would have been obtained had the government not intervened in the economy. An obvious problem with this approach is that no-one really knows what the path of the economy would have been in the absence of government policy. This suggests that it is not a usable criterion and others have to be found.

An alternative approach is to examine the question of whether there were better alternative policies which the government could have pursued, i.e. given that the government had selected policy option A, would performance have been better if it had followed option B? However, this involves some degree of value judgement in two respects. First, there exists a potential conflict of objectives. This makes it difficult to determine which policies are better than the others. Consider, for example, the following situation. There is domestic recession while the balance of payments is in deficit. If the authorities were concerned only with the internal objective, an appropriate policy option would be expansionary fiscal and/or monetary policy. However, such an option would lead to a further deterioration of the balance of payments in virtually all models of the economy. But under some highly restrictive assumptions it will still be possible simultaneously to achieve the twin internal and external objectives by a suitable assignment of fiscal and monetary policy (Mundell, 1962, 1964; Cooper 1969; Levin 1972). An important characteristic of models which

yield that conclusion is that there are no feedback effects, i.e., the analysis is static. Moreover, they assume perfect capital mobility and fixed prices. These assumptions tend to reduce the usefulness of the result for the present purpose. Furthermore, it will be argued in Ch. 4 that in Nigeria there exists a close connection between fiscal and monetary policy through the public sector borrowing requirements. Therefore, it is not easy to separate the two types of policy. Consequencly, the potential for the conflict of objectives is real.

Even where there is no conflict of objectives, it is not exactly clear which measures will achieve a given objective. This situation is best illustrated with the Great Debate in macroeconomic theory which is examined briefly in the next chapter. Basically one group attributes changes in nominal income and the price level primarily to changes in the stock of money and holds the view that fiscal policy which does not affect the rate of monetary expansion will have no lasting effect on the economy. By contrast, the other group denies the primacy of monetary impulses over fiscal policy.

Given these limitations, one may proceed to examine some specific policy options. From the definition of the ideal criterion it is at once clear that a possible policy option is laissez-faire. If the government does not intervene in the economy then it cannot make it behave better or worse than otherwise. A policy of laissez-faire in its purest form can only be pursued if no government exists. If a government exists it must finance itself in one way or another which amounts to intervention in the economy. Since

a no-government economy is no longer a viable alternative in this twentieth century[12], laissez-faire is considered an unsuitable criterion for appraising policy.

In the area of fiscal policy, the nearest alternative to laissez-faire is a situation in which the government balances its budgets. This policy has been advocated in the U.S. as recently as 1953[13]. But as Haavelmo(1945) has shown many years ago, a balanced budget does not necessarily exert a neutral effect on the economy; most of the time it does not, i.e. the balanced budget multiplier is not zero. While a balanced budget multiplier of unity (i.e. income is increased exactly by the amount of the increase in government expenditure) is a special case, the general case is that the multiplier is greater than zero[14]. Moreover, there are reasons why a growing economy need not balance its budget. There is thus no guarantee that a balanced budget policy cannot worsen the performance of the economy. This by itself suggests that careful attention should be paid to the relationship between government revenue and expenditure. The potential significance of this relationship leads to the consideration of the next alternative.

Various macroeconomic models suggest that the relation between government revenue and expenditure, in conjunction with the mode of financing the difference, has important implications for the objectives of economic policy as set out earlier in this chapter. For example a fiscal deficit financed through a new issue of money raises the money supply and tends to exert an expansionary effect on the economy. The resulting monetary expansion may

have adverse effects on the balance of payments and/or prices. Most models go further than this by arguing that, irrespective of the mode of financing, a fiscal deficit is expansionary (e.g. Blinder and Solow, 1973, 1974; Friedman, 1978). Realizing the importance of the fiscal deficit, there have been suggestions that the authorities should fix the proportion of their expenditure financed by borrowing[15]. But as will be shown in the next chapter, there are many objections to targeting the public borrowing requirements. In particular, given that government revenue in Nigeria is dominated by oil earnings whose behaviour is highly erratic, following a PSBR target implies that other components of expenditures will be fluctuating too. Obviously this is not a welcome development. A PSBR target is therefore not an appropriate yardstick. But the issue is taken up again below.

A similar and earlier suggestion has been made with respect to the money supply. In modern times, a money supply rule is closely identified with Milton Friedman who has been advocating that policy since 1948 (Friedman, 1948). The case for a monetary rule rather than discretion rests on the belief of Friedman and his followers that changes in the stock of money affect the level of economic activity with a long and variable time lag. Since the consequences of varying the rate of growth of the money supply cannot be predicted sufficiently accurately, discretionary monetary policy, in their view, could prove to be destabilizing. It will be noted that a consequence of the deficiency of existing statistics in Nigeria is to increase the length of the lags in the effects of policy. This implies that the case for a money supply rule is stronger for Nigeria than for more developed economies.

Another argument for a monetary rule concerns the natural rate of unemployment which is discussed in greater detail in Ch. 2. The fear expressed by Friedman and associates is that the authorities may set the target rate of unemployment below its natural rate. When the actual rate is above this target, they may try to reduce it even below the natural rate through discretionary monetary policy. Although the unemployment temporarily can be reduced below its natural rate, in the long-run it will move back to the natural rate while the rate of inflation will have been raised permanently. Moreover, the value of the natural rate cannot be ascertained precisely so that it will form the target. For these reasons (and for others mentioned in Ch. 4), proponents of a money supply rule argue, a discretionary policy may produce disappointing results, hence the advocacy of a constant rate of monetary expansion. However, from the earlier discussions, this justification of a constant money supply rule is largely irrelevant to Nigeria.

Although a monetary rule is a suitable criterion, it is by no means certain that the attainment of a particular rate is feasible in Nigeria. It will be argued in Ch. 4 that, given the existing conditions and policies, the monetary authorities do not have an effective control over the money supply, i.e. a monetary target is unworkable. But that conclusion depends heavily on the present use of some weapons of monetary management as well as fiscal policy, in particular, interest rates and the fiscal deficit. Given that the main pre-occupation of the government was with the real objectives, especially that of growth (see Section 2.1 and 4.1; also Ch. 2), the government used interest rates and the fiscal deficit in a way that it thought would achieve the highest rates of growth. As seen in Section 2.1, capital expenditure was planned to grow at a

compound annual rate of 24.4 between 1962 and 1980 and 43.9% between 1970 and 1980. In Chapter 2 it will be shown that the consequence of this policy of rapidly increasing capital expenditure to raise the rate of economic growth was a widening budget deficit. Moreover, this deficit was monetized by maintaining low interest rates in the belief that a low interest rate structure would stimulate investment and keep the cost of government borrowing down(16).

These are, of course, self-imposed constraints; another is the exchange rate. The argument to be advanced in Ch. 6 is that the government's exchange rate policy resulted in the domestic currency being overvalued. Since the rate at which a country's currency exchanges for other currencies may be used to effect a correction of a disequilibrium in the balance of payments, the use of the exchange rate weapon, like interest rates, may be used as a criterion.

In effect, what is being suggested is that the use of particular weapons of policy may be used as a criterion for judging the performance of policy. But a problem that needs to be solved relates to the conflict of objectives. Given that the government's desire to accelerate the rate of growth was paramount and the policies which it pursued had adverse effect on other objectives, especially the financial ones, it is necessary to optimize between the objectives. The question to be answered in the process is: Were there measures which the government would have taken to improve the balance of payments and the price stability objectives without sacrificing growth or vice versa? In other words,

are objectives separable? To be specific, could the government have pursued an alternative interest rate policy which would have enhanced the achievement of the financial objectives without worsening growth?

The view taken is that the answer to these questions is generally in the affirmative. The proposed set of alternative criteria is therefore the comparison of the measures taken by the government with alternative ones.

6. SUMMARY

The policy maker in Nigeria is confronted with a number of problems the most important of which are statistical and structural. This tends to reduce the usefulness of assessing the economic performance of the government on the basis of how far it has succeeded in realizing its macroeconomic goals. This is because such an approach does not take into consideration the fact that no accurate measures of the objectives exist. Moreover, the approach does not make adequate allowance for the constraints under which policy making takes place. It does not distinguish between what is feasible and what is not.

It has been an aim of this chapter to show that the objectives of economic policy relating to growth and employment are not suitable standards for appraising macroeconomic policy performance in Nigeria. Other criteria suggested for the purpose (in addition to the price and balance of payments objectives) consist of the comparison of the actual measures pursued with the options open to the government, given the prevailing conditions.

In order to use these criteria, it is necessary to review the macroeconomic measures instituted by the authorities over the review period. In general, these may be divided into fiscal and monetary policy. Although the distinction between the two is not water tight, this classification provides a point of departure for this study. The next three chapters are therefore concerned with the operation of fiscal and monetary policy in Nigeria. Fiscal policy is examined first, in the next chapter.

FOOTNOTES : CHAPTER ONE

1. More will be said on these peculiar objectives of macro-economic policy under monetary policy (Ch. 4).
2. A study of export concentration specific to Nigeria is Karp (1980).
3. On this point consider the disagreement on the causes and cures of inflation, especially the 'institutionalist' or 'sociological' and 'monetarist' views reviewed in Chapter five.
4. The sectoral allocation of bank credit receives a detailed treatment in Ch. 4.
5. The following account of the measures taken to correct the balance of payments is not intended to express an opinion on their appropriateness or otherwise. That judgement is reserved for Ch. 6. Meanwhile, what is important is that the authorities believed that the measures would be effective.
6. For an account of these measures see CPN, Report 1964, pp. 14 - 16; 1965, pp. 10 - 12. See also Ch. 6 where these measures are discussed.
7. A review of the government's fiscal operations is available in Ch. 2.
8. See Ch. 4 for more details on the country's interest rate policy.
9. The subject of inflation is tackled in Ch. 5.
10. For a generalization of this view see Enuenwosu (1972).
11. The relationship between the federal and state governments is taken up again in the next chapter. But see Rupley (1981) and Smith (1981).

12. A modern nation state requires a government at least for the maintenance of law and order. This function therefore constitutes a primary responsibility of a government which has to be financed through a transfer of resources from the private sector income stream. Clearly, this is a case of intervention.

13. Consider the following statements by President Eisenhower in the 'State of the Union Message' of February 1953:

> 'The first order of business is the elimination of the annual deficit ... A balanced budget is an essential first measure in checking further depreciation in the buying power of the dollar ... As the budget is balanced and inflation checked, the tax burden that today stifles initiative can and must be eased ...' Quoted in Burkhead (1954), p. 191.

14. The effect of an increase in government expenditure depends in part on the macroeconomic model being used. Se Ch. 2, Section 1.

15. Eg.Godley (1974). But see Ch. 4 for more details.

16. Details of interest rate policy and its consequences are available in Ch. 4.

CHAPTER 2

FISCAL POLICY

INTRODUCTION

It was noted in the last chapter that a useful way of looking at macroeconomic policy in Nigeria is by examining the measures taken by the Government to realize its policy objectives. It was also stated in that chapter that, for analytical purposes, these measures may be classified into fiscal and monetary policy although it is recognised that the line of demarcation is not clearcut. The present chapter is concerned primarily with fiscal policy. It is organized as follows.

The second set of criteria for evaluating macroeconomic policy enunciated in the last chapter involves relating the measures taken to the options open to the authorities. These options are, of course, derived from the predictions of economic theory. Accordingly, the first section is devoted to a very brief review of the theory of fiscal policy and an appraisal of the relevance of the competing theories to the Nigerian situation. This is followed by an overview of the fiscal system of the country which affects considerably the stabilization policy powers of the central government. Section 3 provides a summary of budgetary developments while Section 4 deals with the determination of government finances. Section 5 contains a critique of certain aspects of demand management in Nigeria. Finally, Section 6 summarizes and concludes the discussion in the chapter.

1. THE THEORY OF FISCAL POLICY

1.1 REVIEW

The state of macroeconomic theory at the beginning of the review period of this study is aptly summarised by J.W. Nevile in his Presidential Address at the Conference of Economists in Adelaide in August 1982. According to him,

> 'Fifteen years ago there was widespread agreement about the role of fiscal policy. Its function was to equate aggregate demand with full employment demand so that, if private demand fell short of the amount necessary to produce full employment, given existing policies, fiscal policy was to be used to increase aggregate demand by increases in government expenditure or cuts in taxation rates. The opposite fiscal measures were thought to be called for in periods of excess demand and inflationary pressures'
>
> (Neville, 1983, p. 1).

This is equivalent to the proposition that, in general

> 'Government tax revenue should be higher relative to government expenditure in periods of high employment than in periods of substantial unemployment"
>
> (American Economic Association, 1955 p. 419)

which became generally accepted in academic circles from the late 1940's and was a product of the 'Keynesian revolution'.

This consensus was broken by the 'counterrevolution in monetary theory' of the late 1960's under the general leadership of Milton Friedman. The 'counterrevolution' has since been christened 'monetarism'. Although the statement to the effect that monetarism does not constitute a honogeneous monolith is now a cliche[1], it is one that describes the state of affairs aptly. Nevertheless, there are some elements that are common to all varieties of monetarism.

Monetarism has been described as a 'set of propositions in direct opposition to Keynesian fiscal policy' (Stein, 1976a). These propositions are many[2] but it would appear that the following form the core and are subscribed to by monetarists of all persuasion. First is the 'hypothesis which assigns to monetary impulses a dominant role in the evolution of economic fluctuations' (Brunner, 1970, p. 2). According to this hypothesis, changes in nominal income are produced primarily by changes in the nominal quantity of money. Furthermore, output is unaffected by changes in the money stock, except in the shortrun (Mayer, 1978, p. 236). Second, it is a characteristic monetarist proposition that in-flation is primarily a monetary phenomenon (Ballen and Stone, 1983, p. 10; Friedman, 1970a). This proposition has profound consequences for policy: Any measure which does not affect the rate of growth of the money stock will have a negligible effect on the rate of inflation. As for fiscal policy, since

> 'Past rates of growth of the money stock are the only systematic factors determining the rate of inflation ... a restrictive fiscal policy without a reduction in the rate of monetary expansion cannot reduce the rate of inflation'
>
> (Stein, 1982, p. 13).

Third, monetarists contend that 'there exists no usable trade-off between inflation and unemployment' (Mayer, 1978, p. 236). However, in the shortrun, such a trade-off exists as the rate of unemployment can be reduced at the cost of a higher inflation rate. But while the effect of a monetary acceleration on unemployment is temporary, that on inflation is permanent i.e. 'A rise in the rate of monetary expansion temporarily reduces the unemployment rate and permanently raises the inflation rate' (Stein, 1982, p. 15). In the long-run then, there is no relation

between inflation and unemployment that can be exploited by the authorities, that is, the longrun Phillips curve is vertical. In the steady state, unemployment will settle at its equilibrium or 'natural' level and will be insensitive to steady inflation or deflation. Fourth, monetarists assert that there exists a stable demand for money function. This is in conflict with the Keynesian notion of an unstable 'liquidity preference' function. Finally, it is assumed that the private sector is inherently stable. According to Brunner,

> 'The private sector absorbs stocks and transforms them into a stabilizing motion ... The monetarist position argues further that the major instabilities and uncertainties of the economic process result from the behaviour of the government sector'
>
> (Brunner 1970, p. 6)

The private sector is thus believed to be self-adjusting to external disturbances. The combination of these propositions yields another proposition, that is, government intervention in the economy should be minimized (Mayer, 1978, pp. 240 - 41). It should also be pointed out that monetarist analyses tend to be conducted in the long-run rather than the short-run period.

As regards policy, the central message of this school of thought is that fiscal policy unaccompanied by monetary accommodation cannot reduce the rate of inflation or unemployment permanently. The idea that fiscal policy is powerless while monetary policy is effective stems from the belief among most followers of Friedman that any increase in public expenditure financed by bonds (as well as any increase in private expenditure resulting from a tax cut which is itself financed by bonds) crowds out an equal amount of private expenditure which would have been undertaken. As

Blinder and Solow (1973) have shown, some crowding out of private by public expenditure is accepted by all. The simplest case of crowding out occurs when the public sector undertakes productive activities that would have been provided by the private sector. A less than obvious but nevertheless universally accepted case of crowding out occurs if a government budget deficit is financed in a way other than new issue of money. This necessitates the issue of a debt instrument which competes with private debt instruments and hence tends to lower their prices. The effect of the upward pressure on interest rates is a reduction of private investment, that is, the value of the government expenditure multiplier is less than that implied by the formula which sets it equal to the inverse of the marginal propensity to save. The first type of crowding out may be referred to as real crowding out and the latter financial.

It has been suggested that the proposition of complete corwding out would be valid only if the demand for money was perfectly interest inelastic(3). But Friedman insists that (within the framework of the IS - LM analysis) the slope of the LM curve or the interest elasticity of the demand for money was irrelevant to the argument (Friedman, 1974, p. 141). The argument of complete crowding out appears to be based on the wealth effect generated by a bond-financed fiscal deficit. When there are significant wealth effects, the initial increase in aggregate demand resulting from government expenditure is reinforced because, with greater wealth, individuals can spend more out of any given level of income. This is represented by a further outward shift of the IS curve.

But the effect of the additional bonds is to reduce wealth by lowering bond value which therefore tends to increase saving thus tending to counteract the rightward movement of the IS curve. Also, with greater wealth, there will be an increase in the demand for money which tends to shift the LM curve to the left. This shift, however, is moderated by the effect of the reduction in bond value. Friedman and his followers apparently believe the expansionary and contractionary shifts in the IS and LM curves to be about equation magnitude but opposite in direction i.e. complete crowding out. This challenges the Keynesian proposition that a bond-financed deficit exerts a net expansionary effect on the level of economic activity. Friedman attributes this difference to the fact that opponents of crowding out emphasize the initial effect of a bond-financed deficit while those who support the crowding out hypothesis stress the continuing wealth effects (Friedman, 1972, p.922).

The question of crowding out has been examined rigorously by Blinder and Solow (1973), Tobin and Buiter (1976) and (Benjamin) Friedman (1978) all of whom conclude against crowding out. Indeed, the Blinder and Solow analysis, subsequently elaborated in another paper (Blinder and Solow, 1974a) shows that 'contrary to the usual supposition, the long-run multiplier for bond-financed deficit spending exceeds that for money financed deficit spending' (Blinder and Solow, 1973, p.327). Although Infante and Stein (1976, pp 475-76) have criticised this analysis as capable of yielding contradictory results, most recent models now support the contention. For instance, the conclusion of B. Friedman in a more recent paper is that 'Debt financed deficits need not crowd out any private investment, and may even crowd in some' (Friedman, 1978, p.597).

The second prong of the attack on mainstream Keynesianism was launched by M. Friedman and specifically directed at the Phillips

curve - a relation which postulates a stable relation between inflation and unemployment. The relation itself was the outgrowth of A.W. Phillips' statistical discovery that, in the U.K. for almost a century, the highest rates of unemployment were recorded when wages fell and the lowest rates of unemployment occurred when wages rose (Phillips, 1958). But this relation is challenged by the monetarists on the grounds that 'Nothing in Phillips' work or subsequent work showed that higher inflation caused lower unemployment, and nothing in economic theory gave anyone reason to believe that the relation Phillips uncovered was either a dependable basis for policy or consistent with economic theory' (Laidler, 1974). Friedman provided the theoretical justification for this view when in his Presidential Address to the American Economic Association in 1967 he unveiled a 'new' Phillips curve which is vertical in the long run (Friedman, 1968). This established the proposition already referred to, that is, in the long run unemployment will settle at its 'natural' rate regardless of the steady state rate of inflation. This 'natural rate hypothesis' was developed independently at about the same time by Phelps (1968).

A more recent criticism of conventional macroeconomic policy is by an extreme version of monetarism - the new classical economics - according to which neither fiscal nor monetary policy can affect output except in the very shortrun in which the policy surprises the public. The new classical economics is based on two fundamental assumptions, viz, continuous equilibrium in all markets and rational expectations. According to Lucas and Sargent, the new classical economic theory 'predicts that there is no way that the

monetary authority can follow a systematic activist policy and achieve a rate of output that is on average higher over the business cycle than would occur if it simply adopted a no feedback, x-percent rule of the kind Friedman and Simons recommended' (Lucas and Sargent, 1978, pp. 60 - 61). Its policy conclusion follows from this prediction. Since fiscal and monetary policies are powerless all attempts at shortrun stabilization are futile and should be stopped. What is recommended is a set of stable policies in which the government specifies the rule of the economic game so that people will become aware of the opportunities available to them and understand the probable results of their decisions.

As the relevance of this development of the theory of macroeconomic policy to the immediate task of appraising macroeconomic policy in Nigeria is highly dubious, it is not pursued further. Instead, what is attempted in the next section is a brief examination of the relevance of Keynesian and monetarist analyses to the Nigerian situation.

1.2 THE RELEVANCE OF THE COMPETING THEORIES

Conventional fiscal policy, as summarized above, has some disadvantages with respect to its application to Nigeria, quite apart from those highlighted by the competing theories. Some of the disadvantages arise from its view of the economy. The idea that the budget deficit is negatively related to the rate of unemployment implicitly assumes that output is demand-determined. In Nigeria, as in many developing countries, there are reasons to suppose that output may be supply-determined. This point has been emphasized by Aghelvi et al (1979, pp 780 - 81):

> 'Agricultural production, which constitutes a large portion of total production in most developing countries, is supply-determined and quite insensitive to demand factors; manufacturing production in many developing countries is also insensitive to demand factors because of the lack of adequate capital, trained labour, and technical knowledge. Moreover, the rigidities in wages and prices that are present in the industrial countries are not present in many developing countries because of the surplus labour situation and the absence of powerful labour organizations. Consequently, unemployment in the developing countries is largely in the form of "disguised", as opposed to "fictional", unemployment. In this setting, supply factors become the major source of instability in output'.

One may expect the relative importance of each of these factors to vary from country to country. In Nigeria the most important would appear to be the existence of various bottlenecks in the economy - a capital goods industry is absent; the bulk of industrial raw materials has to be imported; a shortage of skilled labour exists side by side with mass unemployment of unskilled labour- and the inelasticity of shortrun agricultural response to changes in demand. In these circumstances, a fiscally-induced increase in aggregate demand is likely to spill over onto the external sector, that is, given a negligible shortrun response of agriculture, the increase in demand has to be met by either increased production in the modern sector of the economy which requires the import of capital goods, raw materials and certain categories of skilled labour or the importation of finished goods. In either case, the result is a deterioration of the balance of payments position. If the excess demand cannot be eliminated through either means the price level may have to bear the burden of adjustment.

A further limitation of Keynesian fiscal policy relates to the concept of the marginal propensity to consume (MPC). In the

discussion of conventional shortrun stabilization policy, the impression is usually given that the MPC varies according to income levels. In particular, it is assumed that the MPC of individuals in a lower income group exceeds that of those in a higher income group. It is therefore possible to vary aggregate demand through compensatory finance. But in a developing country like Nigeria, it is by no means certain that richer people have a lower MPC than poorer ones. The reverse may indeed by the case because of the desire to 'keep up with the Joneses' that is typical of richer individuals. In Nigeria, then, socio-ethnic factors are likely to be more important than economic factors in the explanation of differences in MPCs. This is a proposition that has been stressed by Agom Eze in the following words:

> 'It is common knowledge in Nigeria that an average Ibo male whose income is low has a lower MPC as compared with those of some ethnic groups. Even within the same ethnic group the MPC might diverge between different areas. For instance a Yoruba male from Ijebu area is known to be more "miserly" than most other Yorubas'
>
> (Eze, 1971, pp. 94 - 95).

The possibility of the MPC varying according to ethnic groups rather than income was pointed out a long time ago by Peacock and Dosser (1962, pp. 243 - 44) thus:

> In developed economies the marginal propensity to spend of different income, regional or cultural groups will not diverge so much from the overall propensity as is likely to be the case in less developed economies. In less developed countries the criterion will be tribe or region rather than income and we cannot hope to do a great deal to allow for the deviations from the average in present conditions'.

The implication of this phenomenon is that where it is desired to maintain the tax yield constant and the fiscal system is to be used as a cyclical stabilization policy tool, a regressive tax structure is called for - a situation which may be politically objectionable.

Even if one accepts that an increase in government expenditure relative to revenue can raise output and employment, there is one factor which may weaken the effectiveness of the policy in Nigeria. There is a widespread belief that the marginal propensity to import in Nigeria is'very high'(e.g. Aboyade, 1962; Falegan., 1978). This hypothesis is examined in Ch. 6. At the risk of prematurely letting the cat out of the bag, one may say that the results obtained there provide no empirical support for the contention of a high marginal propensity to import. But as noted in that chapter, the results are subject to a number of criticisms. However, a high marginal propensity to import poses a problem because of balance of payments constraint and the reduction of the value of government spend multipliers. This may vitiate efforts at raising output through expansionary fiscal policy.

Monetarist stabilization policy has greater limitations in its application to Nigeria than that of Keynesian analysis. Monetarists make some implicit assumptions which are not fulfilled in Nigeria and in many developing countries. These concern the structure of the economy. A specific example is the absence of the sort of rigidities enumerated above. Furthermore, monetarist analyses do not take into account the close connection between the fiscal deficit and the money stock that is typical of

of developing countries which is a main point to be made in this study. An independent monetary policy that would yield a constant monetary growth rule is therefore difficult to implement. Finally, there is the issue of crowding out which is the principal monetary explanation of the ineffectiveness of fiscal policy. The crowding out argument is weakened by two considerations. First, though hard statistics are unavailable, the unemployment situation in Nigeria seems to indicate that output and employment are highly positively correlated with central government expenditure (the simple correlation coefficient between thw GDP and Federal Government expenditure over the 1961 - 81 period of 0.93). A possible explanation for this is the pervasive influence of the government in the economy. Apart from being a large employer of labour itself, a large section of the private sector depends on it for patronage in the form of contracts for various projects, including residential housing and general construction. Consequently, when the government cuts back its expenditure many firms are adversely affected and are forced to lay off workers. This suggests that real crowding out is likely to be of minor significance. Besides, either indivisibilities of investment or commercial profitability considerations or both make the projects usually undertaken by the government relatively unsuitable for the private sector. Second, substantial portfolio crowding out is not expected to be present. As will be shown in Ch. 4 interest rates are administered. Therefore, the effect of a government budget deficit, whether accommodated or not, on interest rates is almost zero. The prices of private securities are thus unaffected. Also, government and private securities do not appear to be in direct competition for while the government has

had considerable difficulty in selling its bonds, the demand for private securities far exceeds the supply. Therefore, with respect to a developing economy such as Nigeria's, the monetarist criticism of Keynesian stabilization policy based on the crowding out argument is not particularly strong.

In sum, given that output is supply-determined, crude Keynesian predictions are no longer appropriate but Keynesian policies are still relevant if they are suitably adapted. It will be argued in this chapter that the failure to recognize the need for adaptation constitutes a basic weakness of Nigeria's fiscal policy over the review period.

Given this theoretical background, one is now in a position to examine the conduct of fiscal policy in the country. Since the fiscal arrangements determine the institutions responsible for fiscal policy and the powers which such institutions can exercise, a review of the fiscal system is provided in the next section.

2. THE FISCAL SYSTEM

The following description of the fiscal system is a very brief one and complements of the account contained in Appendix 1. A thorough review of the fiscal system to 1966 is available in Adedeji (1969) while Phillips (1975), Rupley (1981) and Smith (1981) give a more recent analysis of the changes since 1951.

2.1 THE FISCAL INSTITUTIONS

Nigeria is a federation whose political structure has changed a number of times. In 1960 there were three regions (East, West and North). The Mid-West was carved out of the West in 1963. The regions were abolished and replaced with a twelve-state political structure in 1967. Seven new states were created in 1976, thus bringing the total to nineteen. At the end of 1981, the fiscal institutions consisted of the Federal Government, nineteen state governments, a host of local government councils and a number of Federal and state statutory corporations. The powers of each level of government are defined in the constitution while the powers to raise and spend funds are set out in a supplement to the constitution. These financial powers are subject to a periodic review which is usually undertaken by an ad hoc fiscal commission. The main task of a revenue allocation commission is to devise a formula for the raising and the sharing of revenue among the governments of the Federation, given the constitutional provisions. Historically, the distribution of the powers to raise revenue has not been as difficult as that of sharing the revenue. The raising of revenue is taken up first.

2.2 GENERATION OF REVENUE

Taxation in federal finance involves three issues: the authority to (i) levy a tax, (ii) collect the revenue from the tax, and (iii) spend that revenue. The first two are treated here while the last is considered below.

Given that the sharing of revenue is a different issue, the author-

ity to levy a tax is more important than that of revenue collection. The government which has the power to impose a given tax decides both the tax base and rate and hence the total revenue that may be collected. In the case of a direct tax, that government also determines the distribution of the burden and incidence of the tax. In any case, in Nigeria, apart from the personal income tax under the Pay As You Earn System, there is no major revenue source where there is a divergence between legal authority and administration. The following account therefore applies to (i) and (ii) above.

In federal finance, certain considerations indicate that a particular level of government should have jurisdiction over a given tax. In general, such principles relate to efficiency and equity. For example, customs and excise duties are more suitable for the federal than the state governments while property rates are best left to the state or local governments. Hicks (1951) has applied these principles to Nigeria.

The operation of these principles in conjunction with constitutional provisions[4] has ensured that the most important sources of revenue - customs and excise duties, mineral taxation and corporate income tax - have always been under the jurisdiction of the Federal Government. Thus the states are restricted to insignificant sources of revenue, which they share with the local governments[5]. The following figures which relate to the fiscal year 1 April 1979 to 31 March 1980 illustrate the relative importance of the Federal and state governments (Nigeria, 1980, pp. 71 and 110):

	Million Naira
Total Revenue of the Federation	9,432.224
Collected by: Fed. Govt.	8,805.000
State Govts	627.244
Fed. Govt. as % of the total	93.35

In addition, the legal basis of the personal income tax (excluding the poll-tax) which is administered by the states resides with the Federal Government. It is therefore clear that the states have jurisdiction over a tiny fraction of the revenue of the Federation. Furthermore, the situation has not changed much since 1946. For example, in 1950 - 51, the figure was 6% (Adedeji, 1969, p. 74).

The ability of the state governments to raise revenue is curtailed in another important respect. Except for the brief period 1977 - 79, they could not borrow money from the public and had to rely on the Federal Government to borrow and on-lend to them. The Federal parastatals, however, were empowered to borrow from the financial system at home or abroad, if the Federal Government guaranteed such loans. But the opportunity was not used ostensibly because they were credit unworthy as they were making losses most of the time. Similarly, the states declined to use the opportunity offered to them by the Federal Government in 1977 - 79. Only one state (Bendel) made use of the facility (Walls, 1979, pp. 5 - 9). The facility was completely withdrawn by the 1979 constitution which states that only the Federal Government can undertake 'Borrowing of moneys within or outside Nigeria for the

purposes of the Federation or any state' (Second Schedule, item 6).

2.3 INTER-GOVERNMENTAL TRANSFERS

The discussion above shows that the Federal Government collects the bulk of the revenue of the Federation. It is therefore necessary to describe the mechanism for transferring resources from the Federal to state and local governments. Such transfers are either statutory or non-statutory.

2.3.1 STATUTORY ALLOCATIONS

The system in operation in 1960 was based on the report of the fiscal review commission chaired by Sir J. Raisman with R.C. Tress as member. The commission recommended the following system where the figures refer to the respective percentage shares of the Federal and state governments: (1) import duties- (i) tobacco (0,100) (ii) motor spirit and fuel (0,100, (iii) beer, wine and spirits (100,0), (iv) general import duties other than those already mentioned (70,30); (2) all export duties (0,100), (3) excise duties - (i) all except those on tobacco and motor fuel (100,0). (ii) tobacco and motor fuel (0,100), and (4) all mining rents and royalties (20,80). All revenues not specifically assigned to any government were paid into the Distributable Pool Account (DPA) and shared among the states on an agreed formula which was changed in 1964 and 1970[6].

In 1964 the share of the states in general import duties was increased by 5%. No major changes were made again until 1970 (by Decree No. 13 of that year) and again in 1971 (Decree No. 9) The effect of these changes was to increase the share of the

Federal Government in total revenue. Then, under the 1979 constitution 'The Federation shall maintain a special account to be called "the Federation Account" into which shall be paid all revenues collected by the Government of the Federation' with minor exceptions (Ch. VI, Pt. IC, Section 149). The exact arrangements were to be worked out by a fiscal review commission whose recommendations would be incorporated in the constitution. These are contained in the Revenue Enactment Bill which was not signed into law until 1981. But the constitution provides that until the Bill became law, the spending powers would be the ones existing in the year 1 April 1978 to 31 March 1979 (Section 272). The scheme for that year was in effect the system in operation since 1971 as follows (figures refer to shares of Federal Government and DPA, %): import duty on beverages, petroleum profits and company income tax and others not specified in this list (100,0); import duty on tobacco, petroleum products, export duty, offshore mining rents and royalties and personal income tax of armed force personnel and External Affairs officers(0,100); unspecified imports (65,35) and all excise duties (50,50). Onshore mining rents were to be shared between the states on the basis of derivation 20% and DPA 80%. The DPA itself was shared among the states on the basis of 50% population and 50% equality.

2.3.2 NON-STATUTORY ALLOCATIONS

These grants are at the discretion of the Federal Government and may be Plan (i.e. provided for in the Development Plans) or non-plan. Grants were not important until 1970 (Nigeria, 1980, p. 32) when provisions were made for subventions of projects

under the Second National Development Plan 1970 - 74. Although such grants were specific, there was no control on how the money was spent so that the states treated them like general grants. The total amount was ₦69.26 million under the Second Plan and ₦1,300 million under the Third Plan (1975 - 80).

Non-plan grants were usually made to supplement the current expenditures of the states unlike the other type which was for capital expenditures. They became important under the Third Plan when they totalled ₦1005 million.

2.4 EFFECT OF THE FISCAL SYSTEM ON THE DISTRIBUTION OF REVENUE AND EXPENDITURE

The system of revenue allocation in use has given the Federal Government command over more than half of the resources available to the governments in the Federation as the following table illustrates:

TABLE 2.1 : DISTRIBUTION OF REVENUE AND EXPENDITURE %

	REVENUE		EXPENDITURE			
			RECURRENT		CAPITAL	
	FEDERAL	STATE	FEDERAL	STATE	FEDERAL	STATE
1976	53	47	52	48	66	34
1977	60	40	51	49	72	28
1978	65	35	49	51	72	28
1979	63	37	41	59	73	27
AVERAGE	62	38	49	51	71	29

SOURCE: NIGERIA (1980) p. 75

2.5 CONCLUDING REMARKS ON THE FISCAL SYSTEM

The emphasis of the foregoing description of the fiscal system is on the fact that in Nigeria the central government determines to a large extent how much the public sector should spend. It also has an almost complete control of the use of the revenue side of the budget as an instrument of fiscal policy. In this respect the states are similar to the local authorities in a unitary state subject to some qualifications.

Given the fiscal system, one is now in a position to examine the conduct of fiscal policy. This is, however, preceded by a delimitation of the coverage of the exercise.

3. SCOPE OF THE ANALYSIS

The present exercise is concerned with the fiscal activities of the FG alone. This narrow coverage is open to criticism in view of the relative importance of the states' expenditures as shown in Table 2.1. However, the decision on the coverage of the exercise has been influenced by two factors. In the first instance, the discussion has been restricted to the operations of the FG out of necessity. As explained in Appendix 1, statistics on the finances of many states do not exist, especially since 1976 while the situation is even worse for the local government councils.

Secondly, there are some theoretical considerations which tend to suggest that the exclusion of the states and local authorities from the discussion does not affect appreciably the substance of

the argument. It has become widely accepted that the subnational governments in a federation can have no major responsibility for stabilization policy (Musgrave, 1959; Oates, 1968, 1972; Burkhead and Miner, 1971). Also, at the practical level, as seen above, the federal constitutions of Nigeria have given control of all the sources of revenue which lend themselves readily to use for stabilization purposes to the FG. Finally, on the expenditure side, the constitution also ensures that the potential roles of these governments are minimal. The expenditure functions assigned to them - health, education, fire protection and other essential public services - are such that cannot be varied easily in response to the movement of the level of economic activity.

The analysis is restricted in another sense. In looking at the macroeconomic measures taken ,it is useful to divide the period into two with 1970 as the dividing year. There are two reasons for this demarcation. The first is that the conditions in the two sub-periods are basically different. The financial system has changed considerably since 1970. It is now more sophisticated than before: the number of financial institutions and the range of services offered by them have increased substantially; commercial banks now have more investment outlets so that the Central Bank need not keep domestic interest rates in line with those prevailing abroad as was the case before 1970. Also, before 1970, the government relied heavily on taxes on international trade, especially import duties. But the external trade sector grew very slowly and the associated revenue even more slowly. Finally, the balance of payments was in deficit continuously except 1968 and 1969 when small surpluses of ₦10.0 m and ₦11.4 m

respectively were recorded. The implications of all this is that the ability of the government to manipulate the economy was limited. But in the 1970's the situation changed dramatically. Aided by the end of the civil war (which resulted in increased oil production) and the oil price increases that started in the early 1970's, the mining sector came to dominate all sectors of the economy. It removed temporarily the financial and balance of payments constraints. The economy in general underwent a drastic structural change(7). In turn, this changed the country's macroeconomic problem from the management of poverty to the economics of affluence. Fiscal policy in the 1960's was therefore different from that in the period since 1970 and this provides the second justification for the sub-division of the review period.

In order to make the discussion manageable, it is necessary to concentrate on only one period. Consequently, the rest of the Chapter is concerned mainly with the period since 1970.

4. FISCAL POLICY PROBLEMS IN THE 1970's

The country was beset by a series of political crises from 1964 which culminated in the civil war that lasted from 1967 to January 1970. During the war, a wide range of restrictive measures were taken. These are catalogued in Nigeria (1970, Ch. 3, esp. pp. 17 - 20) and reviewed by Ayida and Aboyade (1971) and Teriba (1969). They include stringent quantitative controls on imports and foreign exchange transactions in general as well as the widening of the tax base and increases in the rates. The restrictions on the private sector were complemented by an increase in the ability of the government to enlarge its share of the national

output. For instance, at the beginning of the war, the statutory limit on 'treasury bills as a percentage of estimated FG revenue' was 40% (Nigeria, 1970, p. 17). But my March 1970, the limit had been altered to '150% of the estimated revenue retained by the FG and the gross revenues of the states' (CBN, Report, 1970, p. 54). Furthermore, a new debt instrument was introduced in 1968 (see Ch. 4). The consequence of this was the enlargement of the FG deficit from ₦16.6 m in 1967 to ₦473.3m in 1970. The banking system was the main source of funds to the government.

In spite of the measures aimed at correcting the balance of payments disequilibrium, the pressure continued unabated to the end of the war. By 1970 the country faced three sets of problems: deterioration in the balance of payments, inflationary pressure and growing labour disturbances. Two factors tended to contribute to the inflationary pressure. On the one hand, the government deficits which were financed by the banking system, led to a rise in the money stock. On the other, the relaxation of controls on consumer spending (such as the compulsory saving scheme introduced during the war) helped to increase aggregate demand. On top of this was the slow response of supply because of the impaired productive capacity of the economy.

It was against this background that fiscal policy was formulated in the early 1970's. But before discussing specific measures, it is useful to look at government finances over the review decade.

5. FEDERAL GOVERNMENT FINANCES

From the discussion in the introduction, the budget balance may be regarded as a first approximation of the impact of fiscal policy on the economy, although it is recognised that there are problems of definition and measurement (see, for example, Boskin, 1982). Meanwhile, these problems have been assumed away by defining the overall budget balance as the difference between measured actual revenue and expenditure.(8)

The movement of the variable is depicted in Table 2.2. Although the 1970 decade opened with a deficit, surpluses were recorded in the next four years. The spectacular surplus of 1974 was, of course, the result of the windfall gain arising from the oil price increases that started late in 1973. But by the following year, expenditure had more than adjusted to the increase in revenue so that the unprecedented surplus was transformed into a deficit within a year. The deficit was to increase more than twofold in 1976 and, though it declined in 1977, it reached its highest ever in 1978 when it stood at ₦2290.7 million or 6.8% of the GDP. This deficit was dramatically turned into a surplus in 1979 but the surplus disappeared as dramatically as it came. By 1981, the deficit stood at 12.4% of the GDP.

As the deficit is the difference between two quantities, it is determined by the relative behaviour of these quantities which is examined below.

TABLE 2.2 : FEDERAL GOVERNMENT FINANCES, MILLION NAIRA

	REVENUE COLLECTED BY THE FEDERAL GOVERNMENT	REVENUE RETAINED BY THE FEDERAL GOVERNMENT	CURRENT EXPENDITURE	CURRENT SURPLUS/ DEFICIT (-)	CAPITAL EXPENDITURE	OVERALL SURPLUS/ DEFICIT (-)
1959	154.6	92.6	70.1	22.5	44.5	-22.0
60	177.6	100.7	80.6	20.1	59.0	-38.9
1	223.5	156.8	96.1	60.7	67	-6.3
2	238.9	167.0	101.5	65.5	62.8	2.7
3	249.1	173.4	119.0	54.4	63.9	-9.5
4	277.2	168.2	142.6	26.6	75.6	-49.0
5	321.1	190.4	156.8	34.6	79.6	-45.0
6	306.4	185.2	177.3	7.9	7.9	-70.0
7	327.2	241.4	166.7	74.7	91.3	-16.6
8	290.8	207.6	218.8	-11.2	122.5	-133.7
9	378.0	239.8	287.0	-47.2	107.9	-155.1
70	633.2	365.6	638.3	-272.7	200.6	-473.3
1	1169.0	838.2	492.2	346	146.2	199.8
2	1404.8	1073.8	681.4	392.4	295.6	96.8
3	1695.3	1376.2	644.4	731.8	435.1	296.7
4	4537.0	3878.6	873.6	3005	1223.5	1781.5
5	5514.7	4465.7	1685.9	2779.8	3207.7	427.9
6	6765.9	5120.9	2170.4	2950.5	4041.3	-1090.8
7	8042.4	6045.5	1822.2	4223.3	5004.6	-781.3
8	7469.3	5696.7	2895.1	2801.6	5092.3	-2290.7
9	10912.4	8040.9	2359.6	5681.3	4219.5	1461.8
80	15234.0	11556.8	6423.0	5133.8	8091.7	-2957.9
1	11978.9	7068.3	5077.5	1990.8	5699.3	-3708.5
2	11748.8	7490.4	4859.5	2630.9	7519.0	-4888.1
3	10947.4	6791.4	5278.8	1512.6	6385.8	-4873.2

SOURCE: CENTRAL BANK OF NIGERIA, ECONOMIC AND FINANCIAL REVIEW, DEC 1970, JUNE 1975, JUNE 1982; ANNUAL REPORT 1983; AND FOS, ANNUAL ABSTRACT OF STATISTICS 1972 FOR 1959 AND 1960

6. DETERMINANTS OF GOVERNMENT REVENUE AND EXPENDITURE

The trend in and the changes in the composition of Federal Government revenue and expenditure are analysed in Appendix 1 and set out in Table 2.2. This section is concerned with the explanation of the observed behaviour of aggregate revenue and expenditure.

6.1 REVENUE

As stated earlier and explained in Appendix 1 , the country relied heavily on trade taxes until 1971, when petroleum-derived revenue became the major item of revenue. But it is a standard proposition that, ignoring administrative considerations and terms of trade changes, trade taxes are an inefficient source of revenue in an economy in general equilibrium. This is because of the greater excess burden associated with trade taxes as compared with, for example, taxes on individual income and expenditure and domestic production:

> 'The discriminatory nature of trade taxes ensures that their use imposes both a production distortion cost and a consumption distortion cost. In contrast domestic production/consumption taxes impose only a consumption distortion cost since they do not discriminate between home-produced and foreign supplies of the taxed commodity'.
>
> (Greenaway, 1984, p. 71)

If this criterion is used, then it is clear that the revenue system was inefficient. However, this may not be so because the above argument assumes zero collection cost. As Due (1970) and Prest (1971) and others have shown, direct taxes in developing countries entail a high administrative cost which very often exceeds the efficiency cost associated with indirect taxes. The

administrative cost may be so high in some instances that the direct tax is not feasible. In Nigeria, the existence of a large subsistence sector mentioned in Ch. 1 increases the difficulty of income definition and valuation. Thus in a country where income per capita is low,'questions of equity and efficiency are secondary to questions of administrative feasibility' (Greenaway, 1984). Indirect taxes may become a necessity.

Nevertheless, reliance on these taxes has another drawback. The study by Chelliah (1971) suggests that the income elasticity of trade taxes tends to be low compared to other sources of revenue. But as will be shown shortly, the proposition that the income elasticity of government expenditure exceeds unity has been confirmed by almost every researcher. This implies that a country that depended solely or heavily on such taxes would eventually find itself engaging in deficit-financing. There is thus an incentive to develop other sources of revenue. The second aspect of the disadvantage of trade taxes arises from the fact that they are imposed to realize objectives other than raising revenue (Greenaway, 1980, p. 176). One of these other objectives is the protection of the so-called infant industries. It is expected that as these industries 'mature', the degree of protection accorded them would fall i.e. some taxes may be abolished or reduced. The revenue from such taxes is therefore likely to fall. One may think of other objectives of imposing trade taxes which may conflict with that of revenue. A common one is import substitution which may be related to the infant industry argument. Protective duties may be levied on the capital goods and raw materials or the finished products. In

either case, there is a clear conflict with the revenue objective. Appendix Table 6.1 shows that in fact there has been a shift in the composition of imports in Nigeria in favour of capital goods and raw materials - categories of imports that have usually attracted low preferential duties. This also implies a decline in the potential relative importance of revenue from import duties.

The essence of the argument so far is that before 1970, the ability of the authorities to manipulate the main source of revenue was limited. In the period since 1970, the problem was even worse. This is the era when petroleum activities dominated all others. For reasons given in Appendix 1 the government is unable to influence the revenue yield of oil. In a nutshell, the level of production and the prices at which this output is sold are determined exogenously by OPEC. In theory the Government can vary the rates of taxation of petroleum activities but its independence in this respect is limited by two considerations. First, the agreement with OPEC involves the unification of oil taxation, including limits on the rates, in all member countries. Furthermore, even without OPEC, the Government's oil taxation policy cannot diverge very much from what obtains in other countries at similar stages of development. This is due to the fact that the firms involved in oil extraction are multinational corporations with headquarters elsewhere. If Nigeria's oil policy is perceived to be excessively unfair, i.e. if the companies can obtain substantially better deals elsewhere, commercial profitability considerations would encourage the oil companies to reduce their level of activity in Nigeria in favour

of other countries with better conditions. For these reasons, it is concluded that the scope for manipulating oil revenue is rather limited.

The alternative facing the government then is to pay more attention to internal sources of revenue which respond to changing economic conditions within the economy. Import duties which constitute the second major revenue source are, of course, of limited relevance in this respect for reasons already given. Besides, under the present circumstances, the revenue yield of import duties is related to oil exports in one sense. Oil accounts for over 90% of total export earnings (see Appendix Table 6.1). Export earnings, in turn, determine how much the nation can import. Thus the base of the tax on import is influenced considerably by oil. However, the government is free to fix the rates of duties subject to international agreements on tariffs. The condition for the success of the use of tariffs to raise revenue - a low price elasticity of the demand for imports - appears to be fulfilled in Nigeria as will be seen in Ch. 6. Yet, there are limits to the amount of revenue which can be raised from a given level of import (for instance, an excessively high tariff rate may encourage illegal activities such as smuggling and the undervaluation of import for tax purposes).

In the field of direct taxes, the personal income tax is not very important since it is administered by the states subject to the qualifications noted in Section 2.2. But it can indirectly influence Federal Government revenue because the more revenue

the states derive from it, the less the necessity for the Federal Government to make non-statutory transfers. In the case of the tax under the PAYE system, the present marginal tax rates of up to 70% appear to be sufficiently high relative to average income. The degree of progressivity which is shown in Table 2.3 also seems to be adequate. Changes in the rates of direct taxes produce a greater reaction from the economic limits which pays the tax than do changes in indirect taxes, since the former taxes cannot be shifted while the latter usually can. Further increases in the present rates may produce undesirable effects on incentives.

Although by international comparison the current company income tax rate of 50% is low, it is high by historical record in Nigeria since it was raised by 10%-age points in the 1970's. One is then left with excise duties and taxes on consumption. These revenue sources offer greater opportunities than those already considered. In addition to excluding many commodities from excise taxation, certain commodities are subsidized. A prime example of such commodities is petroleum products. In the 1978/79 budget when the price of a litre of gasoline was raised to 20k it was announced that the subsidy still amounted to 80%. There is also some scope for an expenditure tax which was tried in Eastern Nigeria in the 1950's (Hicks, 1956). There is thus some possibility of raising more revenue from excise and expenditure taxation by widening the base and raising the rates.

The conclusion of this discussion is that at present the government has little control over its revenue but that there is some scope for increasing the yield of taxes on domestic production and

TABLE 2.3 : THE PERSONAL INCOME TAX IN NIGERIA : MARGINAL TAX RATES

TAXABLE INCOME		TAX RATE %	
		UNTIL 31.3.77	FROM 1.4.77
FIRST	₦2,000	10	10
NEXT	"	15	15
"	"	20	20
"	"	25	25
"	"	30	30
"	₦5,000	35	40
"	"	40	45
"	₦10,000	45	55
OVER	₦30,000	50	70

DEDUCTIBLE ALLOWANCES (IN NAIRA) :

PERSONAL : 600 OR 10% OF EARNED INCOME, WHICHEVER IS HIGHER

WIFE : 300

DEPENDENT RELATIVES : 200 EACH (MAXIMUM 400)

CHILDREN : 250 EACH (MAXIMUM 1000)

SOURCE: UDUEBO, M.A. 1976. The implications of the recent changes in personal income taxation in Nigeria. Central Bank of Nigeria, Economic and Financial Review 14 (3) (December) : 14 and 17.

consumption. However, there are some conditions to be fulfilled for the success of raising more revenue from these domestic sources. The most important of these is the administrative superstructure which at present appears to be wanting. Then were is the need to sell the idea of the desirability of increasing taxes in this way to the public e.g. the reduction in the subsidy on petrol in 1978, led to a great deal of opposition which was, however, contained by the military administration through ways that might not be feasible for a civilian regime. All this implies that it will take time before the government can influence its revenue as effectively as in, say, the U.K.

6.2 EXPENDITURE

Given that control over revenue in the shortrun is difficult, understanding the main causes and identifying the main areas of expenditure growth become important in bringing the budget deficit under control. This is what is attempted here.

The pattern of expenditure described in Appendix 1 is broadly in accord with what others have found for other countries (e.g. Lotz, 1970; Goffman and Mahar, 1971; Henning and Tussing, 1974; Beck, 1979). The proposition that public expenditure as a proportion of total output rises as income rises has come to be known as Wagner's 'Law of Expanding State Activity'. Wagner saw this phenomenon as arising from 'the pressure for social progress and the resulting changes in the relative spheres of private and public economy' (Wagner, 1958, p. 8).

In recent years, many writers have attempted to offer alterna-

tive explanations of the phenomenon. But there is no consensus of opinion. For example, Martin and Lewis (1956) in a paper that appears to have triggered the spate of writings on Wagner's Law argue that the level of income is not as important as the prevailing conception of the state in explaining a nation's expenditures, particularly its basic expenditures. They also find that richer countries spend more relative to the GDP on defence and transfer payments than poorer ones. This implies that the stage of economic development may affect some items of public expenditure (p. 206).

Richard Musgrave is in broad support of the argument of Martin and Lewis but offers other possible explanations. According to him,

> 'Low income countries today do not operate under the same technological, political and value conditions as prevailed in the past when now developed countries were at similar low levels of income. Attitudes towards growth, changed communications, the demonstration effect and welfare measures taken abroad, the conflict of political ideologies, all make for basic differences in the historical setting'
>
> (Musgrave, 1969, p. 72)

One may add here that the granting of independence to many African countries in the early 1960's might have had the effect of increasing the size of public expenditure relative to the GDP. This line of reasoning has been adopted by Olaloku when he argues that

> 'One relevant factor (in the high growth rate of public expenditure) is the emergence in recent years of political pressures. Not only did the attainment of independence come with a high level of consumption expectations

> which needed to be realized, but it also heralded a general mood of political awareness which increased the demand for public goods. A positive response to these pressures has meant considerable increases in public spending. Furthermore, the widespread belief that spending constitutes development has provided an added force to the escalation'
>
> (Olaloku, 1975, p. 140)

Thus the adoption of a public sector-led accelerated development strategy by many developing countries is a possible explanation of the tendency for public expenditure to grow at a faster rate than the GDP.

Other reasons for the rising expenditure - output ratio have been advanced. Richard Thorn has suggested the growth and changing role of the urban sector as a possible explanation of Wagner's'Law' (Thorn, 1967) while Kuznets has put forward the proposition of production lag in the public sector which necessitates proportionately more expenditure in order to maintain absolute services per head (Kuznets, 1962). Perhaps the most influential of all the recent explanations of the growth of public expenditure is the 'displacement effect' hypothesis of Peacock and Wiseman according to which expenditure is related to revenue which, in turn, is a function of national crises. According to this hypothesis, expenditure follows a time path of discrete steps, with the steps occurring in times of war or other social upheaval (Peacock and Wiseman, 1967, especially p. XXXIV). Recently, Peacock and Wiseman (1979) have offered further explanations of public sector expenditure growth.

It is clear then from this brief review that various factors have been identified as contributing to expenditure growth. The formal testing of most of these propositions is difficult as researchers are unlikely to agree on the most appropriate test. Consider the case of Wagner's 'Law' which was propounded over a century ago. Even the definition of the 'Law' is subject to dispute. Testing is therefore even more difficult. It has been argued that

> Part of the problem can be attributed to Wagner's own inexplicit formulation of his hypothesis plus the fact that various English translations of his work and translations of other writers' arguments concerning his law are inconsistent'
>
> (Michas, 1975, p. 77)

However, what Wagner originally had in mind is not directly relevant for the present purpose and the test that is considered most useful at this point will be pointed out below.

It is not expected that all the factors enumerated above will operate in any one country at the same time. It is therefore necessary to test a number of them separately and in combination. For Nigeria it is possible to test only a few of them. These are the effect of income on expenditure and a highly modified version of the displacement effect.

6.2.1 SIMPLE TESTS OF SOME EXPENDITURE HYPOTHESES

In this section some simple tests of Wagner's 'Law" and the displacement effect hypothesis along with those of the general relationship between income and expenditure are carried out.

6.2.1.1 WAGNER'S LAW

Although a precise definition of Wagner's Law has not yet been established and so testing the hypothesis is a particularly difficult task, in recent years a specific measure - income elasticity of government spending - has found widespread acceptance. Two empirical definitions of this elasticity are generally in use. One is the ratio of the percentage increase in government spending to the percentage increase in the GDP. It is usually assumed that a value of this parameter in excess of unity is consistent with Wagner's Law while a value below 1 is not. Among those who have adopted this approach are Henning and Tussing (1974), Beck (1979), Pluta (1981) and Gould (1983). The other is the econometric approach whereby the elasticity is derived from the coefficient of the GDP in a regression equation with government spending as the dependent variable. An example of a study which has taken this approach is Henning and Tussing (1974). Both methods are employed here, starting with the former.

In Table 2.4 the compound rates of growth of aggregate expenditure and the GDP are presented together with the computed elasticity for various periods. Each period is unique and has been chosen for a particular purpose: the first is the entire review period; 1966 is the last normal year before the civil war which ended in January 1970; the surge in oil revenue occurred between 1973 and 1974; and expenditure reached its height in 1980 after which it declined following the down-turn in government revenue.

TABLE 2.4 : INCOME ELASTICITY OF GOVERNMENT SPENDING AND COMPOUND RATES OF GROWTH OF EXPENDITURE AND GDP, ALL IN MARKET PRICES, 1959 - 83

SAMPLE PERIOD	EXPENDITURE, %	GDP, %	ELASTICITY
1959 - 83	20.3	13.35	1.52
1959 - 80	24.6	15.16	1.62
1959 - 66	10.5	8.10	1.30
1959 - 70	18.0	9.30	1.95
1959 - 73	16.1	10.8	1.50
1970 - 83	20.7	15.9	1.30
1974 - 83	18.7	10.1	1.85

Note: Percentage rate of growth between year zero and n:

$$G_x = \left(\sqrt[n]{X_n/X_o'}\right) - 1; \quad G_x = G_y,\ G_g$$

$$\text{Elasticity } n = G_g/G_y$$

What is clear from the table is that the estimated elasticity is significantly above 1 in each period although there are some variations. At 1.30, the elasticity of government spending between 1959 - 66 and 1970 - 83 is lower than during any other period. Similarly, elasticity was highest between 1959 and 1970 which of course includes the war years. Since the only difference between this period and 1959 - 66 is the war years (1967 - 69) one may say that the war exerted some positive effect on the elasticity of government spending. This speculation is investigated more formally below.

In sum, the evidence presented above is consistent with Wagner's

Law. But, as stated earlier, it is necessary to check these results by applying an alternative test - the econometric method. Following Henning and Tussing (1974) and others, per capita government expenditure, G_c, is hypothesized to depend on per capita income, Y_c. This gives the implicit function

$$G_c = f(Y_c) \qquad (1)$$

Two alternative explicit specifications of (1) are given below:

$$G_c = \alpha_0 + \alpha_1 Y_c \qquad (1a)$$

$$\log G_c = \beta_0 + \beta_1 \log Y_c \qquad (1b)$$

Equation 1a assumes a linear relationship between G_c and Y_c while 1b assumes a non-linear relationship with the additional assumption that the variables are log-linear. Both equations were estimated but, based on the conventional goodness-of-fit and other statistics such as the $\bar{R}^2$, the Durbin-Watson statistic and the standard error of the regression, 1b proved to be far superior to 1a. Consequently, only the former results are reported.

The basic sample period runs from 1959 to 1983 but in most cases actual estimation covers the period 1960 - 83 for obvious reasons (lagging). In what follows, $\bar{R}^2$ is the coefficient of multiple determination adjusted for degrees of freedom, D-W is the Durbin-Watson statistic, h is Durbin's h statistic (from Durbin (1970)), S.E. is the standard error of the regression, and figures in brackets are the t-ratios of the respective coefficients. The estimates of 1b are as follows:

$$\text{Log } G_c = -4.675 + 1.536 \log Y_c \qquad (2)$$

$$(19.10)\ (31.39)$$

$$\bar{R}^2 = 0.977 \quad \text{D-W} = 1.79 \quad F(1,22) = 985 \quad \text{S.E.} = 0.231$$

The results appear to be econometrically satisfactory: both coefficients are highly statistically significant and their signs do not run counter to expectations; the D-W statistic shows that one can accept the null hypothesis of no serial correlation and the $\bar{R}^2$ is reasonably high. β_1 is, of course, the income elasticity of government spending. From the results one may say that the income elasticity of government expenditure is about 1.5 which is roughly equal to the value obtained earlier using the rates of growth of expenditure and income.

Given the reservations expressed in Ch. 1 on the reliability of the population data one may question the validity of the present results. In order to remove any error that the use of per capita measures may have introduced, the equation was re-estimated using the absolute values of expenditure and income:

$$\log G = -6.273 + 1.463 \log Y \qquad (2a)$$

$$(17.04)\ (36.58)$$

$$\bar{R}^2 = 0.983 \quad \text{D-W} = 1.91 \quad F(1,22) = 1338 \quad \text{S.E.} = 0.220$$

The results are not fundamentally affected by the re-definition of the variables. In particular, the income elasticity may still be approximated by 1.5. However, the results show an improvement in terms of the measures of the goodness-of-fit.

So far it has been assumed that planned expenditures are always realized within a single time period (in the present case, a year). But this may not be so because of various constraints (e.g. revenue). In that case, eqn. 1b may be regarded as the equation for desired rather than actual expenditure, i.e.

$$\log G_t^* = \gamma_o + \gamma_1 \log Y_t \qquad (3)$$

where G* is the level of desired expenditure. G* is however, not observable. Assume that actual expenditure adjusts to the difference between the desired expenditure and actual expenditure in the previous period,

$$\log G_t - \log G_{t-1} = \lambda(\log G_t^* - \log G_{t-1}) \qquad (3a)$$

where λ is the coefficient of adjustment. Substitute the value of G_t^* in 3a into 3 to obtain

$$\log G_t = \lambda\gamma_o + \lambda\gamma_1 \log Y_t + (1 - \lambda) \log G_{t-1} \qquad (3b)$$

Its estimates are given by

$$\log G_t = -5.17 + 1.212 \log Y_t + 0.173 \log G_{t-1} \qquad (4)$$

$$(4.57)\ (4.90) \qquad (1.03)$$

$$\bar{R}^2 = 0.983 \quad h = -0.792 \quad F(2,21) = 671 \quad S.E. = 0.212$$

Durbin (1970) has shown that when the lagged dependent variable is present in a regression equation the D-W statistic is an inappropriate test of serial correlation as it is biased toward two. He has suggested instead the use of the h - statistic which is normally distributed. Since the critical value of the z distribution at 5% is 1.65, a value of h between -1.65 and 1.65 may be taken to imply the absence of serial correlation at that level of significance.

In the present case, there is no evidence of serial correlation. The coefficient of the lagged dependent variable is statistically not different from zero at traditional levels of significance. This implies that adjustment is completed within a single period. The computed long-run elasticity of 1.465 is not very different from that obtained from eqn. 2a (1.463). The shortrun elasticity of 1.212 is still above unity.

Beck (1979a, 1979b) and Pluta (1979, 1981) have suggested that the use of nominal as opposed to real variables may affect the size of the estimated elasticity of public spending. This suggestion cannot be fully taken into account because government expenditure price indices are not available. Instead, what has been done is the deflation of both income and expenditure by the consumer price index (CPI). Estimates corresponding to (4) above but using real variables are

$$\log (G/P)_t = \underset{(3.62)}{-6.366} + \underset{(4.11)}{1.016} \log (Y/P)_t + \underset{(4.72)}{0.519} \log (G/P)_{t-1}$$

$\bar{R}^2 = 0.944$ h = -2.24 F(2,21) = 196 S.E. = .231

The h - statistic suggests the presence of negative serial correlation. The equation was therefore re-estimated by using the Cochrane-Orcutt iterative technique which assumes a first-order serial correlation of the error:

$$\log (G/P)_t = \underset{(4.03)}{-4.99} + \underset{(4.48)}{0.798} \log (Y/P)_t + \underset{(7.77)}{0.623} \log (G/P)_{t-1}$$

$\bar{R}^2 = 0.979$ h = 0.143 F(2,20) = 503 S.E. = 0.21

rho = -0.497 t - statistic of rho = 2.75

All the parameters and their levels of significance are now satisfactory and the equation is free from serial correlation. The shortrun income elasticity is now below unity (0.798) but its long-run value is 2.12. In the long-run, then, the results do not contradict Wagner's Law. Given the value and level of significance of the coefficient of the lagged dependent variable, the results also show that inflation tends to present full adjustment of expenditure within a single period (when account is taken of the earlier results).

The results then show that generally the income elasticity of government spending in Nigeria exceeds unity but that in the short-run it is below unity if account is taken of inflation.

6.2.1.2. FINANCIAL CONSTRAINT

The desire for accelerating the rate of economic growth in developing countries is well known and this is reflected in the ubiquitous 'development plans' (which essentially are statements of planned public sector investment programmes) that are found in these countries. One factor that is often stressed is the constraint imposed by the inelasticity of revenue to meet the demand for public goods, both consumption and capital. A consequence of this constraint is that the budgetary decision runs from revenue to expenditure (Peacock and Dosser , 1962). In Nigeria there is abundant evidence of this. For instance, 1978 was declared as an 'austerity' year and the Federal Government attempted to reduce its expenditure in view of the expected downturn in revenue that year. By the following year, it was able to effect a 17.6% reduction in the absolute level of expenditure

- the second time since 1955.

The influence of revenue on expenditure is no longer confined to developing countries alone. Recently, Gould (1983, p. 39) has claimed that

> 'A study at first hand by the author of the budgetary procedures of a number of Western countries - Sweden, Japan, Germany and the U.K. - together with evidence from other studies indicates that governments generally have been guided to a very great extent in their short-term expenditure plans by the projected increases in tax revenues deriving from the estimated increases in GDP'.

This provides a justification for investigating the statistical relationship between revenue and expenditure. This was done by replacing Y with R (government revenue) in eqns. 4 and 5.

The results are presented below

$$\log G_t = 0.145 + 0.411 \log R_t + 0.594 \log G_{t-1} \qquad (6a)$$

$$(0.9) \quad (4.49) \qquad (6.43)$$

$\bar{R}^2 = 0.990$ h = 0.088 F(2,20) = 1114 S.E. = .223

rho = -0.385 t - statistic of rho = 2.00

$$\log (G/P)_t = 0.319 + 0.363 \log (R/P)_t + 0.613 \log (G/P)_{t-1} \qquad (6b)$$

$$(1.26) \quad (4.37) \qquad (7.26)$$

$\bar{R}^2 = 0.978$ h = 0.133 F(2,20) = 484 S.E. = 0.212

rho = -0.487 t - statistic of rho = 2.67

Before commenting on the results, it is necessary to state an assumption underlying the above specifications. Expected revenue, like expected expenditure, is not directly observable. It was therefore assumed that the authorities had perfect foresight,

i.e. revenue expectations were always realised. This is one of the simplest assumptions. The other is static expectations according to which expected revenue is equal to the realized revenue of the previous period. Both were tested and the one reported above turned out to perform better.

Income does not appear to be a significantly better predictor of expenditure than revenue. Indeed, it is outperformed by revenue in the nominal specification (6a). Given this observation, at 0.411, the revenue elasticity of nominal expenditure is very low in the shortrun. But in the long run, it is roughly equal to unity (1.0123). When account is taken of inflation (6b), there is not much difference in the response of expenditure to revenue : the elasticity is 0.94 in the long-run although it is only 0.363 in the short-run.

The implication of a high revenue elasticity of expenditure is that public saving is curtailed. Indeed, the elasticity of above unity obtained in 6a is consistent with the observation made earlier that, on average, expenditure exceeded revenue during the period under review (1959 - 83). The consequences of a rapid adjustment of expenditure to revenue are explored further below.

6.2.1.3 THE DISPLACEMENT EFFECT HYPOTHESIS

Two different sets of test of this hypothesis are examined here. These are based on the influence of the civil war 1967 - 1970.

A common way of testing the influence of war on a relationship is

by adding a dummy variable to the estimating equation. In the present case, the dummy assumes the value of 1 in 1967, 1968 and 1969 and zero otherwise. This modification to the equations produces the following results (see Table 2.5).

Except in the case of the nominal specification with revenue as an explanatory variable, the coefficient of the war dummy is positive and statistically significant at the 5% level or better. Furthermore, the performance of all the equations is appreciably improved by the inclusion of the dummy variable. The conclusion to be drawn from this is that the war exerted a significant positive impact on public expenditure.

Although a positive influence of the civil war on expenditure has been established, the results do not demonstrate convincingly that the war took expenditure to a new higher level which was maintained. This is the essence of the displacement hypothesis.

One of the first formal tests of the displacement hypothesis was carried out by Gupta (1967). Gupta used an equation of the form of 1b and 'To test whether or not a shift in the level of government spending associated with a major social upheaval was significant the following formula is used:

$$|t| = \frac{\text{shift}}{S_1} \quad \text{with} \quad V = N_1 - 2 \text{ d.f.}$$

where $$S_1 = \left\{ S_2 \left[1 + \frac{1}{N_1} + \frac{(X_N - \bar{x}_i)^2}{\Sigma (x_i - \bar{x})^2} \right] \right\}^{\frac{1}{2}}$$

where $$S_2 = \frac{\sum (y_i - y_i')^2}{N_1 - 2}$$, y_i and x_i

TABLE 2.5 : REGRESSION RESULTS

VARIABLE : NOMINAL (N) REAL (R)	INDEPENDENT VARIABLES					$\bar{R}^2$	D-W OR h	F - STAT.	S.E.	RHO
	CONSTANT	INCOME	REVENUE	LAGGED DEP. VARIABLE	WAR DUMMY					
N	-6.16	1.387		0.0788	0.363	0.994		1082	0.188	-0.412
	(6.07)	(6.34)		(0.54)	(3.25)		0.0040			(2.22)
	0.036		0.4445	0.573	0.175	0.992	-0.239	847	0.221	0.476
	(0.235)		(4.98)	(6.512)	(1.54)					(2.6)
R	-6.28	0.949		0.5900	0.26	0.987	-0.396	549	0.178	-0.663
	(5.85)	(6.3)		(9.14)	(3.11)					(4.25)
	0.113		0.394	0.604	0.188	0.983	-0.383	400	0.199	-0.592
	0.464		(5.14)	(7.97)	(1.993)					(3.53)

denote the observed value of log G_c and log Y_c (as defined earlier on in this study) respectively during the period before a social upheaval and Y_i' denotes the value of log G_c as calculated from the regression equation for the sub-period before the social upheaval' (XN+1 stands for the observed value of log Y_c immediately after the shift). (Gupta, 1967, p. 431).

Recently, Nagarajan (1983) has shown that Gupta's formula can be rewritten in a form which is identical to the 'forecast error' formula as given in econometric textbooks (e.g. Kmenta (1971, p. 160)). He then argues that

> 'Gupta employs the forecasting error formula to test whether or not the level of government spending at just one point in time, immediately following a social upheaval, 'back-casted' from the second regression (i.e. equation for the post upheaval period) lies within the boundary lines of prediction of the first equation (i.e. equations for the pre-upheaval period). When we compare two points (one from back-casting and the other from forecasting), the divergence between those two points may arise due to parametric instability of any coefficient in the regression model. In other words, the so-called shift test is basically a less formal test for structural change just at one point'.
>
> (Nagarajan, 1983, pp. 157 - 58).

In another instance, Diamond (1977) has criticised Gupta's test as incomplete. According to him, Gupta has tested both intercept and slope parameters separately and that a joint test using the Chow test is more appropriate for testing structural breaks.

It must be pointed out that Gupta himself actually considered the Chow test in a footnote but dismissed it on the ground that it 'would not add anything of value to the reader' (Gupta, 1967, footnote 9, p. 431). Nevertheless, Diamond's point is taken

because, as Nagarajan has shown, the shift test employed by Gupta is equivalent to a forecasting error formula while the relevant test is one of structural breaks. The Chow test is accordingly used here.

An examination of the estimates of the equations specified in real terms using income as the independent variable and without the dummy variable shows that Eqn. 5 is best. It is therefore used for the Chow test. The Chow test, as given in Chow (1960), requires the identification of the point in time at which a structural break is suspected. In the present case, this is given by the beginning of the civil war (1967). The test statistic follows the F distribution with K and n - 2K degrees of freedom in the numerator and denominator respectively, where n is the number of observations in the full sample and K is the number of regressors.

The computed F statistic is 12.366, the degrees of freedom are 2 and 19 and the corresponding critical values of F are 3.52 (5%) and 5.93 (1%). These enable one to reject the null hypothesis of no structural breaks, i.e., there is evidence for the existence of the 'displacement effect' caused by the civil war in Nigeria.

6.2.1.4 SUMMARY AND IMPLICATIONS OF THE RESULTS

The results obtained in this section are broadly consistent with Wagner's Law and the displacement effect hypothesis as defined earlier. Specifically, the income elasticity of gov-

ernment spending exceeds unity and is close to 1.5. But when an allowance is made for the effect of inflation the shortrun elasticity is reduced to below unity but the long-run elasticity is now considerably higher than that obtained in respect of nominal quantities.

A second finding is the rapid speed of adjustment of expenditure to revenue which, in the long-run,yields an elasticity that is slightly above unity. In the shortrun, the elasticity is close to unity. The result confirms the view that the public sector in developing countries is generally subject to a financial constraint. The constraint implies that public expenditure rises with revenue but there is no evidence that spending and revenue fall together. The conjecture here is that expenditure is downward sticky, hence the tendency for it to outstrip revenue in the long-run, thus giving rise to a deficit which persists for many years. Further consequences of the relationship between expenditure and revenue are discussed below. Finally, the civil war appears to have pushed expenditure to a higher than normal level and that the displacement effect seems to have operated in the country. This may be attributed to some of the reasons given at the beginning of the section.

This brings to an end the discussion of the behaviour of government expenditure during the review period. The following section contains a critical appraisal of fiscal policy in Nigeria.

7. CRITIQUE OF DEMAND MANAGEMENT IN NIGERIA

The authorities did not consider monetary policy as capable of making significant contributions to demand management and fiscal policy was assigned a major role for this purpose (Nigeria, 1970, p. 43). The reliance on fiscal policy in the management of aggregate demand appears to be typical of developing countries (Beveridge and Kelly, 1980). The ultimate objective of demand management is to ensure that the rate of growth of aggregate demand, given the rate of growth of supply, is consistent with the objectives of economic policy. Crockett (1981, pp. 66 - 70) has identified three general instruments of demand management: fiscal, interest rate and exchange rate policies but regards fiscal policy as the main instrument. Interest rate policy is considered in Ch. 4 and exchange rate policy in Ch. 6. This section deals mainly with the contribution of fiscal policy to demand management in Nigeria. But as will become clear later these instruments are interconnected.

The discussion is divided into budgetary and general policies. General policies include incomes and prices policies while budgetary policies refer to the relationship between government revenue and expenditure.

7.1 BUDGETARY POLICY

7.1.1 CONSEQUENCES OF FINANCING THE BUDGET DEFICIT

It is clear from the review in Section 1.1 that as an indicator of the stance of fiscal policy, the budget deficit is not invariant with respect to the mode of financing it. Since foreign borrowing is of relative insignificance it is omitted from the following discussion.

The mechanism by which borrowing from the banking system and the non-bank public affects aggregate demand is now standard textbook stuff and is not discussed in detail here. What is done instead is to mention the factors that are peculiar to Nigeria.

The banking system in Nigeria works with a high level of excess reserves (see Ch. 4). Also, the government debt instruments which they normally acquire are reserve assets. Consequently, lending to the government need not affect credit to the private sector so that commercial bank lending to the government is expansionary.

Secondly, the direct effects on interest rates of the sale of government bonds are almost zero since the rates are fixed by the authorities. Government bonds are sold at face value and carry fixed rates of interest and their capital value is guaranteed by the Central Bank. Moreover, the rates charged by the financial institutions are not affected by the floating of government bonds. The Central Bank is ready to take up any excess supply of bonds. Consequently, financial crowding out is likely to be small.

Finally, given the proposition advanced in section 1.2 that output is probably supply-determined in Nigeria, the effect of an expansionary budgetary measure may be an acceleration of the rate of inflation or a deterioration in the balance of payments rather than an increase in output.

This provides the background to the examination of government borrowing that is undertaken here. Table 2.6 shows the ownership of public debt and gives an indication of how the government has been financing its deficit.

There is little doubt that the banking system has been the main source of funds for the government. The share of the nonbank public in the total debt outstanding was always below 43% and in many cases below 40%.

Another noticeable feature of the table is the declining importance of both the commercial banks and the non-bank public with the consequent rise of the Central Bank as a major holder of government debt in the second half of the decade. As one would expect, the holding of the Central Bank was lowest in the year in which the largest surplus was recorded (1974). It was a time when the government did not really have to borrow. Conversely, the Central Bank holding of government debt was at its maximum when the largest deficit was sustained (1978). The share of the Central Bank in total public debt outstanding is therefore positively related to the size of the fiscal deficit.

Perhaps the net credit of the banking system to the government provides a better picture of the reliance of the government on the banking system than the share of banks with total debt outstanding. This is shown here:

TABLE 2.6 END OF DECEMBER

	OWNERSHIP OF OUTSTANDING PUBLIC DEBT, IN PERCENT				NET DOMESTIC BANK CREDIT TO THE GOVERNMENT, ₦ MILLION		
	TOTAL (₦ MILLION)	CENTRAL BANK	COMMERCIAL BANKS	NON-BANK PUBLIC	TOTAL	CENTRAL BANK	COMMERCIAL BANKS
1970	958.3	21.6	42.9	35.5	662.4	148.4	514
1971	1118.3	30.6	29.3	40.0	531.4	232.4	299
1972	969.5	18.4	40.3	41.3	519.0	124.2	394.8
1973	1061.2	21.0	36.5	42.5	497.1	115.3	381.8
1974	1246.1	1.8	60.5	37.8	-1534.1	-2189.7	655.6
1975	1654.9	18.7	47.7	33.6	-1281.5	-1858.7	571.1
1976	2605.8	17.5	45.5	37.0	199.5	-629.9	826.4
1977	4609.2	36.3	36.4	27.3	2086.4	1015.2	1071.2
1978	5944.3	53.4	18.3	28.3	3336.9	2290.7	1046.2
1979	7282.3	35.0	33.2	31.8	3438.5	1079.7	2358.8
1980	8218.2	38.0	32.5	29.5	3589.2	956.8	2632.4
1981					6607.2	4580.9	2026.3

SOURCES: CBN, ANNUAL REPORT 1972, 1975, 1978, 1979 - 81

The table confirms the earlier observation of an increasing indebtedness of the government to the banks from 1976.

It is necessary to mention at this point the fact that banks in the country operate with substantial excess reserves and that this has created a problem for the authorities. The problem of how to reduce the excess reserves of commercial banks belongs properly to monetary policy but it has some bearing on the present discussion. The point of the argument above is that given excess reserves in the banking system, government borrowing from the commercial banks and the non-bank public, as from the Central Bank, is expansionary. But the position adopted in Section 1.1 is that output is probably supply - rather than demand - determined. If so, a government budget deficity, if sufficiently large, can create macroeconomic problems.

7.1.2 RELEVANCE OF A PSBR TARGET TO NIGERIA

It is in recognition of the potential effect of financing government expenditure through borrowing that suggestions that the amount of government borrowing should be limited have been made. For instance, Godley (1974) has argued that

> 'The record of demand management during the last 20 years has been extremely poor ... demand, output and the balance of payments might have been more stable had some simple rule been followed through thick and thin such as that a tax yield should be sought such as to cover, as nearly as possible, some fixed proportion of public expenditure'.

The British Government eventually declared, in 1976, a target for the public sector deficit while setting out its policy proposal for the following two years (Vaciago, 1978, p. 30).

Targeting the fiscal deficit or the Public Sector Borrowing Requirements (PSBR) is not without criticism. According to the National Institute of Economic Research,

> 'The fundamental weakness of the PSBR is that its size fails to distinguish the influence of the budget on the economy from the influence of the economy on the budget ... Thus running budgetary policy according to a PSBR Target may lead to a perverse stabilization policy : a shortfall from the employment target will increase the PSBR and may lead to deflationary action in an attempt to achieve the original PSBR target'
>
> (NIER, 1977, pp. 43 - 44).

In order to assess the validity of this criticism one needs to look at it more closely.

The essence of the argument is that within a Keynesian fiscal model, fixing the PSBR destroys the automatic flexibility of the economy. For this reason, the NIER suggests calculating the PSBR at the full (or 'high') employment level of income. Although this argument is valid in the context in which it was made (the British economy), its relevance to Nigeria is reduced to some extent by one institutional difference. The built-in stability of the fiscal system is substantially lower in Nigeria than in the U.K. Moreover, the relationship between revenue and expenditure on the one hand and income on the other is not as strong in Nigeria as in more developed, industrial economies, especially in the period since 1970, because of the influence of crude petroleum. Neither the personal nor corporate income tax is a major source of revenue in the country. The bulk of the revenue comes from the mining sector which is not an integrated part of the economy. Automatic stabilizers on the expenditure side are even weaker. Nigeria has no social security of any sort. The only form of transfer

payment apart from public debt charges is pension of civil servants neither of which is directly related to the level of economic activity. Unemployment benefits are unheard of. Instead of the unemployed receiving payments from the State, he is expected to pay some money to the Treasury. As the law stands, all adult males who are not in full-time education (except the very old) are expected to continue to pay their taxes irrespective of whether or not they are gainfully employed. Those employed in the public sector or by registered enterprises pay their taxes under the PAYE system while all others are subject to the poll or head tax.

In these circumstances then, observing a PSBR target is unlikely to be as destabilizing as implied by the NIER. Objection to a PSBR target in Nigeria arises from a different consideration. At various points in the discussion up to this point, it has been emphasized that the principal source of revenue in the country is crude petroleum whose behaviour is highly erratic. Therefore, following a PSBR target implies that other components of expenditure will be fluctuating widely too. This will only serve to increase the degree of uncertainty surrounding government policy. This is obviously not in the interest of the economy. Thus a PSBR target is not advisable in the present circumstances. Other criteria for appraising the budgetary policy therefore have to be sought.

7.1.3 ALTERNATIVE VIEWS ON BUDGETARY POLICY

In appraising a government's budgetary policy, it is helpful to

be able to state whether the budget in a particular year is expansionary or contractionary and if so, whether it is more expansionary than that in another year. Such a measure would also help in future planning i.e. to prescribe a policy of stimulus or restraint given expected values of other macroeconomic aggregates (Mansfield, 1980).

The simplest measure of the impact of a budget, as seen earlier, is the budget balance. But this measure, as applied to a particular year, is defective. As is well known, in a developed economy, the revenue from the existing tax structure as well as certain expenditure items are related to the level of economic activity while tax changes and the general level of government expenditure are largely at the discretion of the government. In this setting, there is a tendency for the overall budget balance to move to a surplus in periods of high levels of economic activity and to a deficit at relatively low levels of income. Thus the budget contains both discretionary and 'automatic' elements. A budget surplus at the height of a boom therefore does not imply that the budget is contractionary. Ideally, then, one would like to separate the 'endogenous' from the 'exogenous' elements of the budget (Mansfield, 1980, p. 402). The quest for devising suitable measures that would indicate the stance of fiscal policy led to the development of such concepts as the 'full employment balance' (Chelliah, 1973) and the'weighted full employment balance' (Borpujari and Ter-Minassian, 1973) as well as the 'cyclically neutral budget' (Dernberg, 1975). Statistical limitations preclude such refinement of the budget balance here and even then the relevance of these concepts to Nigeria are doubtful. Instead,

a different line of investigation is tried here.

This approach is based on the assumption that the export sector is the main source of fluctuations in the level of economic activity Appendix 1. A principal task of fiscal policy then is to dampen the effect of the export sector on the economy as much as possible i.e. smoothen the fluctuations in income. This implies that the year-to-year budget balance is not as significant as its trend over time. The relevance of this point would be better appreciated by considering the situation in Nigeria in the 1970's. The country depended heavily on trade taxes for its revenue. Then came the oil price increases that started from November 1973 which led to a sharp rise in foreign exchange earnings and government revenue. Tanzi (1982, p. 1072) has put the problem facing the government aptly:

> 'The government finds itself in the same situation as the winner of a lottery prize. Should it continue to spend in relation to its "permanent" income;or should it raise the level of its expenditure to the current level of revenue?'

If the government decides to maintain the level of its 'normal' expenditure then a budget surplus would result. But this is obviously not contractionary as would have been concluded if the year-to-year budget balance was used. It is therefore necessary to develop some yardstick by which to judge the stance of policy.

The problem reduces to choosing the level of what might be regarded as 'normal' expenditure and one way out is to carry over the concept of 'permanent income' developed in consumption theory (e.g. Friedman, 1957). An appropriate budgetary policy would

be one which equated 'permanent' expenditure with 'permanent' revenue (Tanzi, 1982, p. 1081). But there still remains the definition of 'normal' or 'permanent' revenue and expenditure. In the demand for money and consumption theory literature a definition of permanent income that is frequently employed is the sum of geometrically weighted past incomes. But there remains the problem of the choice of appropriate lag structure. Mansfield (1980) has adopted a somewhat different approach. According to him, the relevant budget balance is the difference between 'trend revenue'and 'allowable expenditure'. He starts from the premise that in a developing economy, 'the trend of exports sets the optimum capacity of output' and hypothesizes that 'government revenues tend to fluctuate with the level of exports' (p. 404). Consequently, he defines 'trend revenue' as a function of 'trend export', the latter being derived by a log regression against time, using an appropriate base year. 'Allowable expenditure', on the other hand, is defined in relation to trend revenue:

> 'For any year, it is an amount that bears the same ratio to trend revenue as actual expenditure bore to trend revenue in a base year in which the budget is judged to be neutral with respect to its impact on aggregate demand'
>
> (p. 406)

On the assumption that capital market facilities are rudimentary in a typical developing economy, Mansfield defines a neutral budget as one in which borrowing from the bank system is either zero or very small. The difference between 'trend revenue' and the 'allowable expenditure' is the 'implicit deficit'. The expansionary or contractionary stance of fiscal policy relative to the neutral norm is then measured by the difference between

the actual and the implicit deficit. A budget is said to be stabilizing if a contractionary impact corresponds to an above-trend export year or an expansion an impact corresponds to a below-trend export year. Finally, the norm can be used only when there is a 'reasonably high' correlation between revenue and exports.

This approach reduces considerably the problem associated with the actual budget deficit as it takes into account the influence of past and expected values of revenues. Furthermore, it ensures that, if followed, wide fluctuations in output and incomes are moderated, thus minimizing the disruptive effects of a large unexpected fall in export earnings and hence government revenue. Nevertheless, it has its own drawbacks as its application to Nigeria below shows.

The trend in Nigeria's exports shifted in 1955 and was not disturbed again until the petroleum export boom of 1974. Since this covers a substantial part of the review period of this study, 1955 has been chosen as the base year for calculating trend export. Table 2.2 shows that there was no government borrowing from the banking system in 1974. What is more, it was the only year since 1960 in which the government did not borrow from the banking system. Therefore, that year is chosen as the base for calculating allowable expenditure. Since a necessary condition for the use of the norm is that actual Revenue, R_t, and export, X_t, should be 'reasonably' correlated, the simple correlation coefficient for the two variables was first calculated. At 0.992 (apart from the calculation of trend export, 1955 - 83, the

sample period of the following exercise runs from 1959 to 1983), this statistic is high by any standard. The function

$$\log R_t = \alpha + \beta \log X_t + U_t$$

was estimated and produced the following results:

$$\log R_t = -1.501 + 1.171 \log X_t$$

$$(9.29) \quad (54.79)$$

$$\bar{R}^2 = 0.992 \quad D\text{-}W = 1.56 \quad F(1,23) = 3002$$

Given these results, it is concluded that actual revenue and exports are closely correlated. An application of Mansfield's test shows that the budget was destabilizing in seven of the twenty-five years which is not a bad record. It is worth pointing out that five of those seven years are concentrated in the last ten years, specifically since 1974. The effect of the export boom therefore was to increase the destabilizing impact of the budget.

Table 2.2 shows that the budget deficit was lowest in 1962. If this year is used as the base for calculating allowable expenditure, the number of 'destabilizing' years rises to 13. Again if the base year for calculating 'trend' export is changed, the number of years in which the budget was destabilizing becomes 8. These results indicate that the choice of the base years significantly affects the outcome of the test (through the coefficients of the trend export and revenue equations). Finally, it is difficult to determine when the correlation between export and revenue is 'reasonably high'; the approach is inapplicable if this correlation is clearly low. Therefore, the simple budget balance still provides the best indicator of the stance of fiscal policy in Nigeria.

Although a growing economy need not balance its budget, where the expansion of the deficit aggravates macroeconomic problems such as balance of payments disequilibrium and inflation as has been the case in Nigeria, one may be justified in saying that the fiscal deficit is inconsistent with the growth of the economy. Over the entire period, 1959 - 83, the deficit averaged ₦757.4 m or 2.346% of the GDP at current factor cost.On the basis of these facts, one may say that the budgetary system was out of equilibrium since, as will be seen in Chs. 5 and 6, a contractionary policy was called for at certain times of the review period.

The discussion in App.1 Section 5.1 of this chapter indicates that the bulk of government revenue, especially since 1973, cannot be treated simply as withdrawal from the income stream. Revenue from oil activities differs from taxation as conventionally understood in the sense that changes in the rates of taxation of oil have no significant direct impact on the rest of the economy. Therefore, oil revenue may be treated as exogenous to the economy. This implies that spending out of the oil revenue may be considered as deficit-financed. If this line of reasoning is accepted then the budget deficit is substantially larger than hitherto portrayed and the size of the disequilibrium mentioned above is considerably increased. The causes of this disequilibrium are discussed below.

7.1.4. PROXIMATE CAUSES OF THE FISCAL DISEQUILIBRIUM

Before looking at the factors which contributed to the fiscal

disequilibrium of the 1970's, it is instructive to look at the answers given by Tanzi to the question of what the government should do if it is confronted with an unexpected sharp rise in revenue. According to him,

> 'The most important considerations are the following: (a) its expectation about the permanence of the current level of revenue; (b) the immediate investment opportunities for the transitory portion of current revenue; (c) the political pressure on the government for additional spending; and (d) the government's perception of the political and economic benefits of additional spending.
>
> There are three possible general uses for the 'windfall' revenue: (a) current expenditure could be increased; (b) the additional revenue could be spent on domestic capital project; or (c) it could be invested abroad in financial or real assets (including in this the repayment of past foreign debt)'
>
> (Tanzi, 1982, p. 1072)

The considerations, of course, determine the options finally selected. But it is worth pointing out that the last two considerations (political pressure and government's perception of the benefit of additional spending) are more or less normative and not much can be said about them here. The first two involve less value judgement and will be taken up presently.

Nigeria has had an 'export boom' twice - in the 1950's and 1970's - and it is interesting to compare the options taken in those two occasions. The first boom occurred soon after the end of the Second World War. By then the country was still under British rule. The marketing boards which handled all export commodities paid the producers only a fraction of the value of the commodities in the world markets in the good years and the surplus was supposed to be used to stabilize producer prices in

'bad' years. The result was that the country accumulated a sizeable level of foreign exchange reserves which were invested in U.K. financial assets. From 1955 when the terms of trade turned against Nigeria the accumulated reserves were used to cushion the effect of falling export values on imports and government revenue. Therefore, it was option (c) above which was selected.

The situation of the mid-1970's is strikingly similar, although this time the effect is more dramatic. The government, however, decided to choose option (b) above. As explained in Ch. 1, it was committed to the rapid development of the economy. Before 1973 the main constraint on this objective was finance. The sudden and sharp rise in oil revenue virtually eliminated this constraint. But other problems emerged. This concerns the feasible rate of development of the non-oil sectors, the division of output between the public and private sectors, tolerable rates of inflation and acceptable standards of income distribution (Morgan, 1979, p. 64).

The objectives of economic policy discussed in Ch. 1 may be divided into two: Financial (price stability, the balance of payments) and real (growth and employment). It will be clear that the government placed much emphasis on the real objectives. It adopted a pragmatic approach to the new problems facing it (mentioned above). It decided to spend revenue as it came on both current and capital projects. As seen in Table 2.2, current expenditure rose from ₦287 m in 1969 to ₦638.3 m in 1970 and again from ₦873.6 m in 1974 to ₦1685.9 m in 1975. In turn,

capital expenditure rose from ₦435.1 m in 1973 to ₦1223.5 m in 1974 and to ₦3207.7 m in 1975 - a growth rate of over 637%. These increases in expenditure are due principally to the government's attitude toward development and the absence of a consistent fiscal policy.

The sharp increases in planned expenditures under the development plans has already been mentioned (p. 19). For instance, with the unanticipated rise in oil revenue in the early 1970's, the size of public expenditures under the Second Plan launched in 1970 was hastily revised from ₦1,560 m to ₦3,271.9 m. The Fourth Plan was launched in January 1981. It planned for a total expenditure of ₦70,053.3 m (CBN, Report, 1981).

The drive towards higher rates of economic growth thus led to an ever-growing size of public sector investment commitments. One may ask the question: What are the consequences of the government's policy? With the benefit of hindsight one can now state that the consequences are detrimental to the economy. But at the time, little attention was paid to the possible impact on the economy.

As expenditures under the plans were on capital projects one would think that in the longrun they would raise the productive capacity of the economy so that a higher level of aggregate demand can be sustained without increases in prices. But this does not necessarily follow. When total expenditure rises dramatically following a rise in revenue, there is a tendency for inflationary pressures to develop in the shortrun because it is not possible to increase supply instantaneously. The inability to meet demand

in the shortrun may stem from supply rigidities in the economy and, in the case of Nigeria, it is due to the impossibility of increasing the importation of tradeables in the shortrun. These pressures may lead to the demand for higher wages which, if satisfied, would intensify the inflationary tendency as indeed happened (discussed below). This has the effect of reducing the expected budget surpluses as labour costs are rising. Another consequence of sharply increasing capital expenditures is that inefficient projects may be undertaken (Tanzi, 1982, p. 1072). This may arise from a number of factors. There may be insufficient time for detailed feasibility studies of some programmes. The inadequacy of the existing managerial and other technical categories of skilled labour may place an effective constraint on absorptive capacity. Furthermore, criteria other than economic may be used to execute some projects which would never, in the absence of the upsurge in revenue, have been embarked upon. An example that comes to mind in this respect is the size of the multi-billion naira new federal capital project. The decision to build a new federal capital is essentially political. The only significant economic argument is that the decentralization of business activity that would result from the relocation of the capital would reduce the pressure on the present capital for accommodation, communication and other infrastructural facilities. But it is doubtful if the savings would be sufficient to cover the cost. Even if costs could be covered, the expansionary effect on aggregate demand is undeniable.

A third effect of sharply rising capital expenditures is that such expenditures almost invariably have recurrent components

(Heller, 1974). New current expenditures are more difficult to reduce than capital expenditures because they tend to be permanent. The building of a new school can be stopped with little cost but to close down an existing school is relatively costly in terms of the teachers and pupils. An example of a project which raises the recurrent expenditure of the government but has no clear positive direct effect on the economy is the creation of seven new states in 1976. This was attended by expansion in government expenditure on overhead costs (such as administrative buildings and the increased demand for social services arising from the rapid urbanization of the new state capitals as well as labour costs). Other projects in this category embarked upon in 1976 include the introduction of a free universal primary education in September and the expansion of the number of universities from six to nineteen.

There is also the possibility of the export boom coming to an end before some of the projects are completed. The oil boom ended in the late 1970's and some of the projects that were stranded include the liquified natural gas plant and the iron and steel complex as well as the new federal capital. Each has been scaled down considerably while work on some phases has been stopped. The universal free primary education scheme has already collapsed.

Finally, given the generally high import content of government capital expenditures that is characteristic of developing countries, the balance of payments implications of the above developments become apparent. As Table A-6.2 shows, the composition of

import has shifted in favour of capital goods and raw materials so that a high import content of production is not confined to the public sector alone. The building of the liquified natural gas plant, for example, requires imported capital goods as well as skilled labour. In the sphere of consumption demand, the pressure is also often deflected to the external sector, thus leading to a deterioration in the balance of payments.

In sum, the government's budgetary policy was biased in favour of the growth objective. But this had adverse implications for the financial objectives. The policy of sharply raising government expenditures with the aim of increasing the rate of growth resulted in the expansion of aggregate demand beyond the level that was justified by the increase in the productivity of the economy. The resulting excess demand was eliminated through price level changes (see Ch. 5) and deterioration in the balance of payments (discussed in Ch. 6). However, even in terms of the growth objective, the policy was misconceived. The authorities were too optimistic about the ability of fiscal policy to raise the rate of growth. In particular, they failed to take into account the supply constraint mentioned in Section 1. The policy based on the mistaken belief that government spending constitutes development resulted in inflation and balance of payments disequilibria. The next subsection deals with what was referred to as general policies at the beginning of this section.

7.2 OTHER POLICIES

The second set of policies consist of incomes and prices policies.

Incomes policy is discussed first.

Between 1960 and 1981 there were four general wage increases. The first wage rise was based on the recommendations of the Morgan Review Commission of 1964. But this was a very small exercise compared to those of the 1970's. After the war, there was a general upward review of wages and salaries in 1971. The increases were up to 30% in the case of the very low income groups. But the review in 1975 raised the minimum wage in the public sector from ₦15 to ₦60 per month. The increase was subsequently extended to the private sector which has always enjoyed a higher average wage than the public sector. The public sector award was backdated by nine months. This resulted in the payment of ₦859.3 m in arrears throughout the country. The public sector paid ₦567.3 m as arrears (Falegan, 1978, p. 14).

This sudden increase in money income affected the money supply appreciably. Commercial bank cash ratio rose from 19.6% at the end of 1974 to 29.2% at the end of 1975 compared with a statutory requirement of only 8%. Money supply (M_1) also rose by 73.5% during the year (1975). In 1974 the corresponding figure was 42.5%. At the same time, the consume price level rose by 33.7% - the highest ever. This tends to suggest that the effect of the acceleration of monetary growth on output was small. Interest rates were not affected as they were administered. Therefore, within the Keynesian framework, there is no compelling reason to suppose that real income rose. Under normal circumstances, the monetarist implication of monetary acceleration would be to exert an expansionary impact on both output and prices.

But as pointed out previously, the absence of the requisite factors of production domestically implies that output cannot expand. The burden of adjustment would then have to be borne by prices and the balance of payments.

The proposition that wages tend to be sticky downward is universal. In 1980, as a result of union pressure, the minimum wage was raised again to ₦100 per month. The pressure for higher wages stemmed in part from the failure of wages to keep pace with inflation. As a deflationary measure, a wage freeze was imposed from 1978 with the concession of up to 7% rise in for the lowest paid. Yet, the rate of inflation was 18.7, 11.1, 11.4 and 20.9% respectively in 1978 - 81. Real wages therefore fell during this period. In addition, the precedent set by the 1975 award played a part in determining the size of the increase demanded which would have raised the minimum wage from ₦60 to ₦300 per month.

Under some specified conditions it is easy to show that minimum wage legislation affects the level of employment. Assume a single competitive labour market. For the minimum wage W_m to be binding the market wage W_c of the honogeneous workers must be less than N_m. The introduction of W_m leads to a reduction in the level of employment. Raising W_m further reduces the level of employment.

Of course, as the assumptions are relaxed, the results of the minimum wage become more complex. Thus, as Stigler (1946) showed a long time ago, there is a range over which raising the minimum

wage actually increases the level of employment. Assume the labour market is competitive on the demand side but there is only one employer. The effect of the minimum wage may be illustrated graphically as follows:

W_o and E_o are respectively the monopsonistic wage and the resulting level of employment, and W_c and E_c are the corresponding competitive values

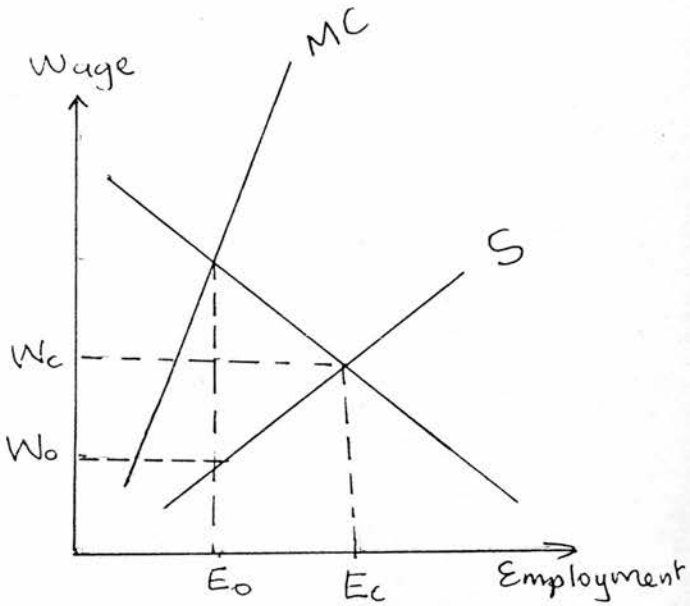


FIGURE 1 : MONOPSONISTIC EMPLOYER AND MINIMUM WAGE

An externally imposed minimum wage between the original monopsony wage W_o and the competitive wage W_c raises the level of employment (Maurice, 1974). However, if W_m exceeds W_c employment would fall as in the other case considered above.

Perhaps the two-sector model of minimum wage legislation is more appropriate for Nigeria. This is because the minimum wage usually relates to the public sector alone. Theoretically, then, there are two sectors: the public sector which is covered by the legislation and the private sector which is not. Such a model has been developed by Welch (1974). In this model, the affected sector behaves exactly as in the case where the entire economy is covered. Workers who have been laid off

in this sector go to the other sector in search of jobs, thus shifting the labour supply curve (S in Fig. 1) outward and depressing the wage there. But as the wage falls some of the workers displaced in the sector covered by the minimum wage and others originally employed in the uncovered sector decide not to work in the uncovered sector as the wage there is now less than the minimum they are prepared to accept. Many factors therefore affect the outcome of the minimum wage legislation: the elasticity of labour supply, the minimum tolerable wage of those who cannot secure employment in the covered sector and the elasticity of the demand for labour. Welch gives a formula which, when plausible values are assigned to the variables, shows that aggregate employment falls with the introduction of the minimum wage.

In Nigeria the public sector minimum wage tends to set a floor to wages in the private sector (IMF, 1975, p. 317) although wage settlements here are by collective bargaining. This implies that, for the purpose of analysing minimum wage legislation, no distinction need be made between the private and public sector. Given this assumption, the Federal Government minimum wages may be said to have an adverse effect on employment. Indeed, some state governments complained when the new ₦100 minimum monthly salary was introduced that they would not be able to honour that commitment. Although it is difficult to separate the effects of that legislation from those of declining government revenue, it is likely that the minimum wage made some contributions to the retrenchment of workers in the private and public sectors and the embargoing of the recruitment of workers in the public sector

from 1981.

The conclusion then is that the policy of drastically increasing wages and salaries across board adopted by the Government from 1971 was inconsistent with its objectives of price stability and full employment. A more formal framework for reviewing salaries and wages in the light of the prevailing rates of inflation and productivity would have been desirable. Wages and salaries may be set to keep pace with inflation or may be linked to productivity increases so that they do not fuel the inflationary situation or lead to a reduction in the level of employment. A stable policy is preferable to the present ad hoc system which produces sharp and sudden increases in money income which, in turn, produces shocks in other variables such as the money supply, the price level and the level of employment.

The other aspect of demand management which will be briefly considered is prices policy. As a result of threatening inflationary situation which resulted mainly from the release of pent-up demand after the civil war, the government instituted a system of price controls in March 1970. A board was set up to fix and enforce prices of schedules items. These included all 'essential' processed commodities (e.g. sugar, beverages and beer) as well as other manufactured goods. Rents on residential buildings were subsequently brought under control.

It is now standard proposition that price control alone cannot solve the problem of inflation. Therefore, only one aspect which is peculiar to the Nigerian situation will be mentioned.

As seen in Ch. 1, in calculating the CPI on which the calculation of the rate of inflation is based, greatest weight is attached to food. But the major items of food - locally produced foodstuffs - were not subject to control. Apparently this was because of the heterogenous quality of foodstuffs and the problems of measurement since such products were sold by a largely illiterate population. Grading which is necessary for control was thus difficult.

As elsewhere, the administrative control of prices tends to encourage inefficiency such as corruption. This has the effect of raising the cost of price administration. Furthermore, a large scale government interference with prices may also lead to distortion both in production and consumption.

Other measures taken with respect to the objectives of price stability and the balance of payments are reviewed separately in Chs. 5 and 6. Also, incomes policy is treated again in Ch. 5.

8. CONCLUSION

Judged by the objectives set for it, the performance of fiscal policy during the review period has been less than satisfactory. The balance of payments position which started to deteriorate in 1976 worsened sharply in the last few years of the review period (Ch. 6). The rate of inflation also was at double digits by the end of the period and has fallen below 10% only once since 1974(Ch. 5). As the aim of anti-inflation policy was to reduce the rate to 5% the objective was not achieved. Finally, another

objective - that of reducing the dependence of the country on oil for government revenue and foreign exchange - was clearly unattained. It will also be shown in Ch. 6 that the fiscal incentive schemes - tax reliefs and favourable foreign exchange measures - designed to diversify the economy did not appear to have had the desired effect.

The chapter dealt with why fiscal policy was not as effective as the authorities wanted. Basically two factors were responsible. On the one hand, the government could not influence its principal source of revenue : it could not control the quantity and prices of the oil it sold. These were determined by external forces, namely, world demand and OPEC. Given the existing institutional arrangements for marketing oil, the ability of the government to vary the rates of taxation of oil activities was curtailed by international commitments. Furthermore, the government failed to exploit new and traditional revenue sources as oil increasingly became the dominant source. On the other hand, there was the sharp growth of expenditure evident in Table 2.2. The interaction of these forces produced a growing budget deficit. What is more, during the review period, the deficit was financed mainly through bank credit which is clearly inflationary. The resort to direct price control to contain the inflationary pressure was thus a futile exercise as it did not tackle the fundamental problem which was the budget deficit. As regards the balance of payments, the main fiscal measures taken included quantitative controls on imports and administrative control on foreign exchange. Inflation and balance of payments policies are discussed in greater detail in chapters five and six.

On an average basis, the budget was in deficit between 1959 - 83. This apparent fiscal disequilibrium was traced to the effects of (i) the civil war (displacement hypothesis);(ii) the desire of the government for raising the rate of economic growth (through the development plant); and its incomes policy. The consequences of the fiscal behaviour for the monetary policy are considerable and are considered in greater depth in Chs. 3 and 4.

As stated at the end of the last chapter, fiscal policy is one of two sets of macroeconomic policies to be considered. The other is monetary policy which is the subject of the next two chapters.

FOOTNOTES : CHAPTER TWO

1. For a review of the different facets of monetarism, see Burton (1982).
2. While Brunner (1970) enumerates only four, Stein (1982) has five, Purvis (1980) eight and Mayer (1978) twelve.
3. For a statement of this position, see Nevile (1983) p. 2.
4. For instance, under the 1979 constitution, customs and excise duties, mines and minerals, including oil fields, oil mining, geological surveys and natural gas, the taxation of incomes, profits and capital gains are the exclusive preserves of the Federal Government. (The Constitution of the Fed. Rep. of Nigeria, 1979, Second Schedule, the Exclusive Legislative List, items 14, 21, 36 and 56).
5. Specifically these are : sales or purchase tax, football pools other than betting taxes, motor vehicle and drivers' licence fees, entertainment tax, land registration and survey taxes, property tax, land ground rents and fees and the following two which they share with the local governments : trading licences and fees, and motor park dues (Nigeria, 1980, p. 54).
6. Details are contained in Nigeria (1980).
7. These and other changes are described more fully in Phillips (1975)

TABLE A-2.1 **MAJOR CLASSES OF GOVERNMENT REVENUE**

AS PERCENTAGE OF THE TOTAL

	DIRECT TAXES	OIL REVENUE	IMPORT DUTIES	INDIRECT TAXES	NON-TAX REVENUE
1961	6.8	3.8	53.8	71.6	21.6
1962	7.3	11.0	49.4	65.3	27.4
1963	6.7	6.8	49.2	67.6	25.7
1964	5.5	7.4	54.6	74.1	20.4
1965	6.6	8.8	52.8	73.0	20.4
1966	8.6	8.7	38.2	69.5	21.9
1967	11.2	20.0	33.6	60.6	28.3
1968	13.5	11.5	37.5	64.3	18.8
1969	11.6	11.5	40.1	69.0	19.3
1970	22.8	26.3	34.0	58.3	18.9
1971	38.6	43.6	24.4	42.0	19.4
1972	44.4	54.4	19.5	34.2	21.3
1973	50.3	59.3	18.2	30.5	19.2
1974	66.8	82.6	7.2	11.0	22.2
1975	54.2	77.6	11.4	13.8	32.0
1976	56.9	79.3	10.7	13.0	30.0
1977	60.2	75.6	12.0	14.2	25.6
1978	53.0	62.3	19.2	22.7	24.2
1979	52.7	81.4	8.0	10.5	36.8
1980	60.1	81.1	9.2	11.9	28.0
1981	57.3	71.5	14.6	19.4	23.3
1982	47.7	66.5	14.0	19.9	32.4
1983	44.7	62.0	10.2	18.1	37.2

SOURCES: CENTRAL BANK OF NIGERIA, ECONOMIC AND FINANCIAL REVIEW DEC 1970 - JUNE 1983; ANNUAL REPORT 1983.

CHAPTER THREE

MONETARY POLICY I : SOME THEORETICAL CONSIDERATIONS

INTRODUCTION

Until the publication of Keynes' General Theory there was little doubt that money exerted considerable influence on some key macroeconomic variables. The General Theory itself did not dismiss money as inconsequential. The title indicates the importance Keynes attached to money. Before then he had already written two volumes on money (Keynes, 1930). But then the interpretation of the General Theory is not necessarily the same as the theory embodied in it (Leijonhufvud, 1968). This interpretation, especially in the 1950's, had the effect of de-emphasizing money to the extent that the proposition that 'money does not matter' could be ascribed to an extreme version of the resulting theory. Although the General Theory attracted criticism right from the time of its publication[1] it was Friedman's 're-statement' of the quantity theory of money in 1956 which, in the longrun, proved to be the greatest attack on it. Even then, Keynesianism or the theory derived from or based on the General Theory continued to be the mainstream macroeconomic theory until the late 1960's. Since then there has been a marked change in macroeconomic theorizing. This is evident in the titles of such papers as 'Does fiscal policy matter?' (Blinder and Solow, 1973) and 'Is fiscal policy dead?' (Peacock and Shaw, 1978). The debate between those who assign to money a dominant role in the economy (e.g. Friedman and Johnson) and those who maintain that money is not as important (e.g. Tobin and Kaldor)

is yet to be resolved. But in recent years, both groups have modified their positions and are now agreed that money indeed does influence the level of economic activity. A good expression of this view is by Modigliani who has written : 'Milton Friedman was once quoted as saying, "We are all Keynesians, now", and I am quite prepared to reciprocate that "we are all monetarists" - if by monetarism is meant assigning to the stock of money a major role in determining output and prices' (Modigliani, 1977, p. 1).

The following two chapters are therefore based on the premise that money does matter and that it is desirable to control its behaviour. The control of the money stock, along with the factors which influence it, is subsumed under the term 'monetary policy' here. The present chapter deals mainly with the theory of monetary policy in Nigeria. The actual operation of policy is discussed in the next chapter.

This chapter deals mainly with the market for money. As Goldfeld (1973, p. 577) has observed,

> 'The market for money is a critical component of virtually all theories that explain the evolution of aggregate economic activity (and) an accurate understanding and protrayal of this market is essential both to the analysis of past monetary policies and to the formulation of appropriate contemporaneous policy'.

The relevant aspects of this market to be considered relate to the effect of the quantity and changes in the stock of money on the level of economic activity (i.e. the transmission mechanism of monetary policy). While, as seen above, it is generally agreed that the behaviour of the money stock affects real var-

iables such as output and employment, as well as the price level, the magnitude of this effect is subject to dispute. It was also stated above that, on the one hand, Friedman, Johnson et al believe that money dominates all other factors in explaining changes in prices, on the other, another group of people typified by Tobin, Kaldor and Davidson are convinced that the influence of money on economic activity is (very small, or, at any rate) nowhere as significant as implied by the first group. In attempting to demonstrate the relative importance of money, certain issues have been raised. Among others, these include the appropriate definition of money, the existence of a stable relationship between money and a few variables, the endogeneity or otherwise of the money stock, and the significance of income, wealth, interest rates, expectations and other economic factors as the determinants of the demand for money. The interest rate issue has two aspects : the interest elasticity of the demand for money, and the most relevant alternative measures of the rate of interest.

In general, the medium used for investigating these issues is the demand and supply functions of money. Consequently, this part of the chapter is concerned primarily with these functions, using Nigerian data. But at the outset it must be admitted that the quality of the available data does not permit the examination of most of the issues that have been raised in the last few years. For example, national income data are not available on a frequency shorter than annual. It is felt that transforming the annual observations on income into quarterly observations using, for example, related series as suggested by Friedman (1962), Chow

and Lin (1971) or Ginsburgh (1973) would only serve to increase the unreliability of the already imperfect national income statistics. As a result, annual data have been used throughout the empirical analyses. It is clear then that statistical limitations place an effective constraint on the coverage of the exercise.

The discussion is organized as follows. Section two of the chapter contains a review of one model of the demand for and supply of money in Nigeria. In section three, a money demand and supply model is specified and estimated. This is followed by an examination of an alternative approach to money supply determination. Specifically, the discussion is aimed at providing answers to the following questions : What factors affect the money supply? How much control has the Central Bank got over these? The balance sheet approach to money supply determination has been adopted in pursing these issues. The final section contains the summary and conclusions of the preceding analysis. The analysis now opens with an examination of the issues relating to the targets and indicators of monetary policy.

1. TARGETS AND INDICATORS

In formulating and implementing a country's monetary policy, what specific variables should the monetary authorities aim to control? Furthermore, how would they appraise the impact of their policy, i.e. what criteria should they use to evaluate the effectiveness of policy? It is normal practice to consider these issues respectively in terms of the targets and indicators of monetary policy and this convention is followed here.

It is usual to distinguish between four vafiables involved in the monetary policy decision process. The authorities are assumed to have objectives which they wish to achieve. They also have instruments - variables which are under their direct control - which they manipulate to achieve their ultimate objectives. In between the objectives and instruments are proximate objectives and indicators. The former are variables which give an early and unambiguous indication of theory in which the ultimate objectives will actually move in response to policy or other disturbances while the latter are variables which are functionally related to the instruments such that they provide preliminary information to the authorities about the stance of policy(2). In view of the role of the proximate objectives, the authorities are often interested in achieving pre-determined values of these variables, hence the alternative term 'targets' (Saving, 1967). As the latter is more suggestive, it is used from this point onwards.

The issue of monetary targets has featured prominently in policy discussions in recent years(3). The discussions were apparently given an impetus by the adoption of monetary targets by many Western countries in the last decade. The Federal Republic of Germany started the trend in late 1974, followed by the US (1975), Switzerland (1975), Canada (1975), the UK (1976) and France (1976)(4). Before then, however, many countries outside the Western World had operated some monetary targets. These were mainly countries which had to borrow from the IMF. As will be shown in Ch. 4, Nigeria was one of the few countries which adopted a domestic credit expansion (DCE) target voluntarily before 1970.

The relevance of targets and indicators to the present purpose arises from their potentiality as criteria for evaluating monetary policy. As such, only one of three issues usually discussed in the monetary targeting literature (e.g. Griffiths and Wood, 1981a) is examined here. The two issues not dealt with are (1) the question of whether or not policy sould be 'activist', i.e. should there be 'fine tuning?' (2) the desirability or otherwise of announcing the rules by which the authorities act. These are largely irrelevant to the present purpose. On the other hand, the adoption of targets always involves the problem of the selection of targets. The choice of targets is therefore considered here.

There are two broad sets of competing targets : prices and quantities. The relevant prices are interest rates while the quantities relate to monetary aggregates. Without going into a detailed review of this and other aspects of monetary targeting which is available in Griffiths and Wood (1981) and other sources (e.g. Artis, 1974; Sparks, 1979; Fortin, 1979; White 1979), one may identify certain criteria for the selection of a target.

First, the choice of a target involves some hypothesis about the structure of the economy (Artis, 1974 p.521). Poole (1970) has formalized this view by showing that in a closed economy a monetary target is more suitable with a stable demand for money functions but that an interest rate target is indicated with stable expenditure functions. In the case of an open economy with fixed exchange rates, it is now known that a money supply target is more effective in stabilizing income while a DCE target is more suitable for the balance of payments (Polak and Argy,

1971; also Vaciago, 1975).

The second consideration in selecting a particular variable to be targeted is that the variable should be within the control of the authorities. If the public believes the target is not attainable and the authorities consistently miss it, this may affect adversely the public's expections about the ability of the government to conduct monetary policy effectively. This could increase the degree of financial instability. Third, it is desirable that data relevant to the chosen target be available in a timely fashion and of reasonable reliability. This is to say the authorities should be able to monitor the target variable. Finally, if the choice of a target is controversial the outcome could be disappointing. This point has been emphasized by the Bank of England (1977, p. 151) according to which 'the principle of adoption of a target may be more important than its precise form, or the particular magnitude to which the target relates'.

Having outlined some of the factors that need to be taken into consideration in selecting a monetary target, one may now examine the relative suitability of interest rate and monetary aggregates as targets of monetary policy.

This review is based on British monetary policy(5). The Report of the Radcliffe Committee on the Working of the Monetary System was published in the year the Central Bank of Nigeria was opened. It is now well known that the Radcliffe Committee recommended an interest rate policy as the centre piece of monetary policy (Nobay, 1973, p. 52). Although the Bank of England temporarily

abandoned the use of the Minimum Lending (or Bank) Rate, the effect of the introduction of Competition and Credit Control in 1971 was to restore it to'full vigour' (Nobay, 1973, p. 43). Thus, as in most other countries, the rate of interest served as the target of monetary policy in the UK until 1974. According to the Governor of the Bank of England,

> 'What swung the argument in favour of choosing a quantity rather than a price as the indicator of the thrust of monetary policy was the acceleration of inflation ... We can, if we like, think of the nominal interest rate as having an "expected inflation" component and a "real" interest rate element. But we can never observe expectations which are in any case likely to differ from person to person, and to be volatile. The real rate of interest is an abstract construct. This has made it very difficult to frame the objectives of policy in terms of nominal interest rates'
>
> (Bank of England, 1978)

In terms of the criteria listed above, this argument is suggesting that reliable data on interest rates are no longer available, hence it was abandoned in favour of, or at least subordinated to, a quantity target (£M3).

An alternative explanation of the change in policy is offered by Artis and Lewis (1981, p. 42) who argue that

> 'the switch to monetary aggregates in the 1970's is a reflection more of a change of emphasis within the goals of monetary policy, especially a concern with inflation. At the same time there was disillusion with old remedies. Prices and incomes policies had been tried but with mixed success ... incomes policies became politically charged and a monetary rule for restraining wages became increasingly attractive, if only because of its relative novelty, and because the underlying environment had been altered by the transition to more flexible exchange rates'.

Another argument in support of the explanation in terms of

changes within the objectives of monetary policy and exchange rate considerations has been offered by McClan (1978, esp. pp. 4 - 8).

This brief review shows that during the review period of this study both interest rate and monetary aggregates were used in many countries at one time or the other. But the issue of targeting cannot be assessed properly in the Nigerian context without an examination of the theoretical and institutional background to the formulation of monetary policy. The institutional setting is considered in Ch. 4 while the discussion of the theoretical background proceeds in this chapter with an examination of the market for money in Nigeria.

2. THE MARKET FOR MONEY

The analysis of the market for money in Nigeria is approached via an investigation of the demand for and supply of money in the country.

2.1 THE DEMAND FOR MONEY IN NIGERIA

A logical starting point of this discussion is a review of the work which already has been done in this area.

2.1.1 A REVIEW OF THE EMPIRICAL STUDY OF THE DEMAND FOR MONEY IN NIGERIA

The study of the demand for money in Nigeria is of a recent origin (the first is (Tomori, 1972)). Although a number of studies now exist[6] 'there are only very few of them that

warrant any review' as most of them are 'essentially relatively simple regression without a clear discrimination between the issues raised in the controversies that have raged elsewhere' (Okigbo, 1981, pp. 52 - 53). The main conclusions of these studies are that the most important factor affecting the demand for money is income and that the rate of interest is an insignificant argument of the demand for money function(7).

The most comprehensive and recent of the existing published studies and hence the one chosen for review is that of Akinnifesi and Phillips (1978).

Like many of its predecessors, this study contains very many mistakes. In order to make this critique as short as possible only the most obvious ones are pointed out. The authors estimate the following inplicit function in its additive and multiplicative forms:

$$M_t = f\left(Y_t, \sum_{i=1}^{7} R_{it}, M_{t-1}\right) \qquad (1)$$

where M stands for narrow (M_1) or broad (M_2) money, Y is the GDP (both deflated by the CPI) and R_i are interest rates including the minimum lending rate (MLR) and 'an average lending rate' (ALR). In one set of equations (the additive form) all the interest rates are used in each equation but in the second set (log-linear) only one rate is used at a time. Since the results of the former turn out to be disappointing (probably because of multicollinearity) only those of the log linear formulation are discussed here.

Separate equations are estimated for M_1 and M_2 and their components (currency, demand, savings and time deposits). In addition an equation is estimated for the supply of M_1 and high powered money. But the focus of attention here is on the demand for M_1 and M_2. The independent variables in these equations are real GDP, ALR, lagged dependent variable and a dummy variable (W) to capture the effect of the Civil War. All the estimated coefficients (except the income variable in M_2) are statistically significant and correctly signed. From these results they conclude that 'Generally the demand for real money balances can be described as a function of its own lagged value, expected real income and expected rate of interest' (p. 35). Furthermore, the insignificance of the coefficient of the dummy variable 'probably provides some support for the monetarists' view that the demand for money is relatively stable over time' (p. 34).

The use of commercial bank lending rates in a demand for money function is a bit odd. As a proxy for the opportunity cost of holding money, interest rates are supposed to measure the degree of substitutability between money and other assets. A lending rate is not the return on any asset. To compound the problem further, one is told that the lending rate used is not a particular one but an average of some undisclosed rates. Neither is the weighting formula specified.

Secondly, since the authors refer to their set of equations as a 'model of the monetary sector of Nigeria' which is made up of seven structural equations and seven identities, the use of

ordinary least squares is inappropriate. A simultaneous equation estimation method is required in such a situation.

On interpretation of the results, the authors seem to have missed the concept of functional stability by connecting it with the dummy variable.

Finally, many of their conclusions do not follow from their analysis. For instance, they attribute growth in the money supply to government spending and inflation to money supply. But nowhere do government expenditure nor prices appear in their model.

Their model thus suffers from many methodological shortcomings and errors of interpretation. In the next section, an alternative is tested.

2.1.2 A MONEY DEMAND FUNCTION FOR NIGERIA

One of the very few settled issues in the empirical work on the demand for money is that this demand is related to a 'scale' variable (which serves as a measure of the value of transactions) and the opportunity cost of holding assets in money balances. As usual, the actual variables to be used for this purpose are the subject of a dispute. The dispute has resulted in the emergence of many theories of the demand for money which may be classified broadly into two : the transactions and asset theories. An essential difference between these theories concerns the views of their authors on the functions of money. Transactions theories of which the inventory theoretic models of Baumol (1952)

and Tobin (1956) are archtypes stress the importance of money as a medium of exchange. According to these theories, money is held principally for transactions purposes. The non-synchronization of receipts and payments together with the costs of converting assets into and out of money necessitates the holding of the latter in spite of its lower yield compared to that on the former.

Asset theories on the other hand take a broader view of the role of money. Money is regarded as only one of many alternative ways of holding wealth(8). Therefore, the demand for money may be considered as part of the problem of balancing one's portfolio of assets in a way that maximizes the returns on them. Each asset is assumed to yield some services which may be pecuniary or non-pecuniary. Pecuniary returns are easy to identify and are not in doubt. Assets such as savings and time deposits, bonds and equities are cases in point. Money is one of the assets which provide non-pecuniary services. One may think about the service provided by money in the form of simplifying transactions by reducing search time as under barter (Brunner and Meltzer, 1971).

Judd and Scadding (1982, pp. 994 - 95) have argued that the differences between these theories involve four empirical issues : the definition of money, the appropriate 'scale' variable, the opportunity cost of holding money, and the proxy for incomplete adjustment of the demand for money in the shortrun.

Leaving aside the question of the appropriate definition of money

for the meantime, it is felt that these issues provide a useful frame of reference for an empirical study of the demand for money in Nigeria.

2.1.2.1 FUNCTIONAL FORM OF THE DEMAND FOR MONEY

As noted above, there is a great deal of controversy surrounding the appropriate scale and opportunity cost variables(8). For certain reasons(9), the problems of the scale variable have been assumed away here by using the GDP alone.

Over the years, certain conventions about the form of the money demand function have been established. In the first instance, nominal money balances and income are hardly used in empirical work currently. This is because the use of nominal variables constrains the elasticity of money demand w.r.t the scale variables to unity (Lieberman, 1980, p. 46). As the unit elasticity condition often is not met in practice, real magnitudes are often used. But when real magnitudes are expressed as the ratio of the nominal quantities to the price level, as is done below, the price elasticity is constrained to unity.

The second convention is that the demand function is almost always estimated in log-linear form. However, the appropriateness of this formulation depends on individual cases. In most studies using Nigerian data, the log-linear specification outperforms the additive version (e.g. Ajayi (1974), Ojo (1974a) and Teriba (1973, 1974)) while others report only the results for the multiplicative case e.g. Ghosh (1981)). The superiority

of the conventional formulation is also confirmed by this study and only those results will be reported.

There is an exception to the log-linear formulation. If the rates of interest (or inflation) are entered in the multiplicative form the impression is given that the effect on the demand for money of doubling the interest rate from, say, 1 to 2% will be the same as from 10 to 20%. Two options are available: (a) enter the interest rate directly or (b) transform the rate to (1 + r/100) before taking the log. White (1976) and Friedman and Schwartz (1982) have opted for (a) which is adopted here while Hacche (1974) prefers (b).

Finally, it is claimed that 'money demand equations tend to be subject to serial correlation' (Lieberman, 1980, p. 44). Thus, there is a tendency for money demand equations, especially since 1976, to be estimated by an autoregressive technique such as the Cochrane-Orcutt procedure[10]. A related but simpler transformation is first differencing (Hacche, 1974). But as Hendry and Mizon (1978) have shown, such a procedure may be inappropriate in some circumstances (e.g. if the original variables are covariance stationary).

Given these considerations and those in footnote 4, the money demand function may be represented as

$$\log m_t = \alpha_o + \alpha_1 \log y_t + \alpha_2 r_{1t} + \cdots \alpha_{n+1} r_{nt} + u_t \qquad (1)$$

where m is real money balances, y is real income, r_1-r_n are interest rates, and u is a stochastic disturbance term.

2.1.2.2 ESTIMATION AND RESULTS

The data are annual observations on each variable over 1960 - 80. M_1 is currency outside banks plus private sector demand deposits and M_2 is M_1 plus time and savings deposits. The three interest rates used are the rate on savings deposits (SDR), time deposits over twelve months (TDR) at commercial banks and the Treasury Bill issue rate (TBR). The test statistics are as defined in the previous chapter(11). The estimates of eqn (1) are shown below:

$$\log m_{1t} = -2.89 + 0.972 \log y_t - 0.112\ TBR_t + 0.383\ SDR_t + 0.112 TD$$
$$\quad (2.93)\ (6.11) \qquad (1.34) \qquad (5.4) \qquad (0.213)$$

$$\bar{R}^2 = 0.931 \quad D\text{-}W = 1.57 \quad F(4,15) = 65$$

$$\log m_{2t} = -3.68 + 1.24 \log y_t - 0.127\ TBR_t + 0.284\ SDR_t + 0.053\ TDR_t$$
$$\quad (3.86)(8.06) \qquad (1.59) \qquad (4.17) \qquad (1.02)$$

$$\bar{R}^2 = 0.946 \quad D\text{-}W = 1.61 \quad F(4,15) = 84$$

Among the interest rates, only the coefficient of the Treasury rate has the right sign but it is not significant even at the 10% level. The time deposit rate is neither correctly signed nor statistically different from zero at any conventional level of significance. Although wrongly signed, the coefficient of the savings deposit rate is highly significant. Real income is also significant as well as having the right sign. As the equations do not pass the test of a money demand function in terms of the opportunity cost variable, they were re-estimated using one or two rates at a time (thus reducing the risk of multicollizearity). The results (for M_1) are the odd-numbered equations in Table 3.1.

Sometimes it is argued that m in eqn (1) represents not actual but desired money balance (Feige, 1967). If so, it is necessary to eliminate the desired (unobservable) quantity. A common way of accomplishing this is the partial adjustment hypothesis. Thus, following Hetzel (1984) and others eqn (1) becomes

$$\log m_t = \lambda\alpha_0 + \lambda\alpha_1 \log y_t + \lambda\alpha_2 r_{1t} + \ldots + \lambda\alpha_{n+1} r_{nt} + (1-\lambda)\log m_{t-1} \quad (1a)$$

where λ is the coefficient of adjustment and is constrained to lie between 0 and 1[12]. The estimates of this functional form are shown as the even-numbered equations in Table 3.1.

An eximation of this table shows that none of the equations meets the normal expectations of a money demand equation. As before, real income is both correctly signed and statistically significant at any reasonable level. Apart from eqn (2), the coefficient of SDR is statistically significant but again wrongly signed in all the equations in which it occurs. The coefficient of TBR is nearly always correctly signed (except in 1) but is not statistically different from zero in any of the equations. The least satisfactory variable whose coefficient is neither of the correct sign nor statistically significant (except in 5)is TDR. The lagged dependent variable is well behaved.

Some of the D-W statistics are very low, especially in 1, 3 and 5, thus suggesting a problem of serial correlation. These and other equations were re-estimated using the Cochrane-Orcutt iterative technique. The results displayed two patterns. In

TABLE 3.1 : AGGREGATE DEMAND FOR REAL MONEY BALANCES (M_1) : REGRESSION RESULTS

EQUATION	CONSTANT	REAL INCOME	SDR	TBR	TDR	LAGGED DEPENDENT VARIABLE	$\bar{R}^2$	D-W/ h	F(1,j)	STANDARD ERROR
1	-6.05 (4.89)	1.614 (9.3)		0.149 (1.1)			0.76	0.707	32	0.297
2	-1.41 (2.035)	0.352 (2.49)	~~-0.0058~~	-0.0058 (0.128)		0.88 (10.8)	0.970	0.430	204	0.106
3	-4.01 (7.2)	1.127 (10.07)	0.349 (6.84)	-0.000035 (0.0012)			0.93	1.336	130	0.16
4	-2.04 (4.10)	0.516 (4.19)	0.117 (2.01)			0.66 (5.23)	0.978	0.030	281	0.0907
5	-4.60 (5.18)	1.343 (7.94)			0.157 (2.69)		0.819	1.028	44	0.260
6	-1.48 (2.98)	0.362 (2.86)			-0.000035 (0.0012)	0.877 (9.25)	0.970	0.539	203	0.106
7	-2.95 (3.20)	0.981 (6.57)	0.391 (6.78)	-0.104 (1.425)	0.0029		0.935	1.56	92	0.156
8	-1.50 (2.61)	0.456 (3.74)	0.151 (2.911)	-0.0608 (1.45)	-0.06	0.637 (5.94)	0.979	-0.760	226	0.087
9	-3.98 (6.9)	1.124 (9.76)	0.367 (5.15)	-0.008	-0.019 (0.377)		0.927	1.37	82	0.165
10	-1.40 (1.9)	0.352 (2.4)		-0.008 (0.148)	0.0029 (0.08)	0.876 (8.9)	0.968	0.528	143	0.110

one case, both the value of rho and its t-statistic turned out to be below 0.5 while the coefficients of the independent variables and the goodness-of-fit statistics were substantially unaffected. But where rho is statistically significant, the $\bar{R}^2$, the t- ratios and the F statistic are drastically reduced(13). This suggests that the models have been misspecified.

The underdeveloped nature of the financial structure of less developed countries (as evidenced by the narrow range of financial assets) has led to the suggestion that the substitution between money and real assets may be quantitatively more important than that between money and financial assets.

It is then argued that the relevant opportunity cost variable is the expected rate of inflation (Aghelvi and Khan (1978))(14). This hypothesis is tested here.

Like all expected values, the expected rate of inflation is unobservable and an adjustment mechanism is required. Two alternatives - perfect foresight ($p_t^* = p_t$) and static expections ($p_t^* = p_{t-1}$) where * denotes expectations and p is the actual rate of inflation - were tried and the results are presented below.

As in the case of interest rates, in none of the equations is the coefficient of the rate of inflation statistically significant as well as correctly signed. The conclusion to be drawn from these results is that, given the assumption on the formation of price expectations, the rate of inflation is not a significant factor in the demand for money in Nigeria. This is

TABLE 3.2 : INFLATION AND THE DEMAND FOR MONEY : REGRESSION RESULTS

	CONSTANT	REAL INCOME	p_t	p_{t-1}	LAGGED DEP. VAR.	$\bar{R}^2$	D-W
11	-2.77 (3.88)	1.13 (5.5)	0.003 (0.28)			0.776	0.55
12	-2.28 (3.96)	0.967 (5.92)		0.017 (2.09)		0.823	0.61
13	-2.41 (3.55)	1.006 (5.07)	-0.004 (0.37)	0.018 (2.04)		0.813	0.71
14	-0.72 (2.1)	0.26 (2.3)	0.0015 (0.4)		0.866 (10)	0.969	1.85
15	-0.78 (2.6)	0.28 (2.7)		-0.001 (0.27)	0.88	0.969	1.856
16	-0.697 (2.0)	0.251 (2.1)	-0.002 (0.5)	0.002 (0.4)	0.89 (8.5)	0.967	1.92

in conflict with the findings by Ojo (1974) who obtained a statistically significant and correctly signed coefficient of the price variable. But his results are subject to some qualifications. First, as he admits, his sample period which runs from 1960 - 1970 is too short to permit valid generalizations. Besides, the war years (1967 - 69) are included so that only seven of the years are normal. Furthermore, even with the presence of the lagged dependent variable, the D-W statistic which is then biased toward 2 is only 0.95. Finally, the coefficient of the lagged dependent obtained by him is -1.22 which implies that the coefficient of expectations which he had earlier contrained to lie between 0 and 1 is now 2.22 - an implausible result. The earlier conclusion about the insignificance

of inflation in the demand for money is therefore retained.

Based on all the usual goodness-of-fit statistics, eqn (8) in Table 3.1 is preferred to any of the equations considered so far. Given the limitations of this equation pointed out above, one may make the following highly tentative statements. The income elasticity of the demand for money is low at 0.456. But in the longrun it exceeds unity (1.26). The second observation is that Treasury bills appear to be a weak substitute for money - a result that was obtained by Teriba (1974) for an earlier and shorter period. The most puzzling of the present results is that, according to conventional interpretations, savings deposits are a complement for money. This is surprising because, owing to the relatively difficult conditions required by commercial banks for the opening of current accounts, many people find it more convenient to operate savings accounts. Moreover, these accounts are operated virtually like current accounts (Ajayi, 1974). One would then have expected the demand for money to be negatively related to the savings deposit rate (SDR). A possible explanation of the curious result may lie in the fact that a large fraction of commercial bank deposits is owned by the corporate sector. A negative relation between the demand for money by households and the savings deposit rate may be offset by the demand by other agents. But no data exist for that level of disaggregation.

A final hypothesis[15] that is tested is the influence of uncertainty on the demand for money. According to Friedman and Schwartz (1982, p. 39), both variables are positively related.

The civil war in Nigeria provides an ideal opportunity for testing this hypothesis. This has been done by including in the preferred equation a dummy variable (W) which takes the value of 1 in 1967 - 69 and zero in other years:

$$\log m_{1t} = \underset{(2.8)}{-1.1} + \underset{(3.9)}{0.40} \log y_t + \underset{(3.1)}{0.174} SDR - \underset{(1.7)}{0.73} TBR + \underset{(4.5)}{0.56} \log m_{t-1} - \underset{(1.0)}{0.06} W$$

$$\bar{R}^2 = 0.98 \quad D\text{-}W = 2.3 \quad F(5,13) = 175 \quad S.E. = 0.088$$

On the basis of these results, one can conclude that the war exerted a negative but insignificant impact on the demand for money[16].

2.1.3 CONCLUDING REMARKS ON THE DEMAND FOR MONEY

Various specifications of the demand for money have been tried. The best fitting equation is that which contains the following dependent variables : real income, the rate offered by commercial banks on savings, the treasury bill issue rate and the lagged dependent variable in addition to the constant which is negative and statistically significant. The results suggest that Treasury bills are a weak substitute for money while savings deposits complement money. The coefficient of the savings deposit rate, though statistically significant, does not have the expected sign.

Many other formulations, including demand functions for the components of money, were estimated but not reported here. A striking feature of these regressions relates to the coefficients

of the savings deposit rate and the Treasury rate. In nearly all the regressions, the former is statistically significant but incorrectly signed while the latter is correctly signed but statistically insignificant. Furthermore, the best equation is that which contains these two rates as independent variables. Finally, the signs of these variables are reversed in the time deposit equation (not reported), although neither is now significant. There is no apparent reason for this observed behaviour. Treasury bills, savings and time deposits may be related.

In the absence of any obvious explanation, one may say that the Treasury rate is acting as a proxy for the opportunity cost of holding money. In this case, it is possible that Treasury bills are positively related to an asset which is a close substitute for money. In the personal sector, it is difficult to see how Treasury bills can be direct substitutes for money since they are issued in large denominations (₦20,000) which are beyond the reach of most people. Savings deposits, on the other hand, may be related to a scale variable which is more appropriate than, say, real income. The savings deposit rate, alternatively, may be acting for some unobservable interest rates in the financial system.

2.2 THE ECONOMETRIC APPROACH TO MONEY SUPPLY DETERMINATION

Money supply is examined in greater depth below. Its treatment here is therefore very brief. In particular, two functional specifications only are tried.

Following Teigen (1964) and Gibson (1972), the supply of money is

hypothesized to be a function of the base or high-powered money, H, the Central Bank's minimum lending rate (MLR) and the commercial bank prime lending rate (PLR). This gives

$$\log M_t^s = \beta_o + \beta_1 \log H_t + \beta_2 MLR_t + \beta_3 PLR_t + u_t \qquad (5)$$

where all variables are in nominal terms.

According to Gibson, MLR should be negatively related to the supply of money while PLR and H are expected to be positively related to the supply of money because 'ceteris paribus we expect banks to expand their earning assets when their reserves rise, market interest rates rise, and the discount rate falls' (Gibson, 1972, pp. 365 - 6).

The estimates of equation (15) are:

$$\log M1_t^s = \underset{}{-1.478} + \underset{(2.87)}{1.0007} \log H_t + \underset{(36.69)}{0.0993} MLR + \underset{(1.743)}{0.200} PLR_t \quad \underset{(3.063)}{}$$

$$\bar{R}^2 = 0.986 \quad D\text{-}W\ 1.693 \quad F(3, 16) = 452 \quad S.E. = 0.143$$

With the exception of β_2 (the coefficient of the Central Bank discount rate), the coefficients of all variables have the expected signs and one significant at the 1% level. The coefficient of H is statistically not different from unity. But the coefficient of MLR is wrongly signed and, at the 5% level, it is statistically insignificant (although it is significant at the 10% level).

When the hypothesis of incomplete adjustment was tested, the following results were obtained.

$$\log M1^{s}_{t} = -0.402 + 0.478 \log H_{t} - 0.0130 MLR + 0.0574 PLR + 0.573 \log M1^{s}_{t-1}$$
$$(0.840)\ (3.379)\qquad (0.251)\qquad (0.932)\qquad (3.740)$$

$\bar{R}^2 = 0.992$ D-W = 1.6455 h = 1.088 F(4,15) = 618 S.E. = 0.2064

All coefficients now carry the correct sign but those of the interest rate variables are not statistically different from zero at any conventional significance level. Moreover, the absolute value of the same coefficients are relatively low. The $\bar{R}^2$ and F statistics are improved. Given that the critical value of the normal distribution at 5% is 1.645 (one tail), one cannot reject the null hypothesis of zero serial correlation so that the OLS estimates may be regarded as reliable.

In view of the non-significance of β_2 and β_3 and their low algebraic values, the equation was re-estimated without the interest rate variables. Another reason for their exclusion is their relative stability over the review period (PLR, for example, was 7% between 1967 and 1973 inclusive). The outcome of that procedure is shown below:

$$\log M1^{s}_{t} = -0.0947 + 0.423 \log H_{t} + 0.631 \log M1^{s}_{t-1}$$
$$(0.621)\ (5.008)\qquad (6.780)$$

$\bar{R}^2 = 0.993$ D-W = 1.6525 h = 0.854 F(2,17) = 1308 S.E. = 0.1034

This time the intercept term is virtually zero. Other coefficients are significant at the 1% level and the $\bar{R}^2$ is slightly improved. The standard error of the regression is also slightly lower and the lower h statistic implies one can accept the null hypothesis of no serial correlation with more confidence. This then is the equation of the money supply.

High-powered money is itself endogenous in the model. It is expected that it will respond to changes in some variables in the system. For example, a higher level of income requires a higher level of transactions balances (assuming, of course, that velocity is fixed) which, in turn, require a greater amount of high-powered money. Therefore, it is expected that the level of income will be positively related to high-powered money. The latter is then hypothesized to be a function of nominal income and high-powered money in the previous period i.e.

$$\log H_t = \gamma_0 + \gamma_1 \log Y_t + \gamma_2 \log H_{t-1} + u_t \qquad (16)$$

The estimates of the equation are

$$\log H_t = \underset{}{-3.138} + \underset{(4.82)}{0.768} \log Y_t + \underset{(3.4)}{0.437} \log H_{t-1}$$
$$\qquad\qquad (4.68)$$

$\bar{R}^2 = 0.982$ D-W = 1.8587 h = 0.386 F(2,17) = 523 S.E. = 0.164

The results are statistically satisfactory in all respects : absence of autocorrelation, high $\bar{R}^2$, all coefficients are statistically significant at the 1% level and are correctly signed and the null hypothesis that all the regression coefficients are zero can be rejected at the 1% level. However, one may want to compare them with those of an equation suggested by Akinnifesi and Phillips (1978). The equation is given by

$$\log H_t = a_0 + a_1 \log g_t + \log H_{t-1} \qquad (17)$$

where g = rate of growth of constant price GDP. Their argument is that since growth is one of the objectives of monetary policy in Nigeria, the monetary authorities would vary H in such a way as to realize this objective. It is clear that this argument assumes that changes in H have a predictable effect on the rate of growth of the GDP. In that case, g should be on the left

hand side and not on the right. The argument therefore does not justify equation 17. Nevertheless, it was estimated and yielded:

$$\log H_t = \underset{(0.271)}{-0.0771} + \underset{(2.014)}{0.873}\, g_t + \underset{(22.44)}{1.019} \log H_{t-1}$$

$\bar{R}^2 = 0.966$ D-W = 2.2204 h = -0.503 F(2,17) = 270 S.E. = 0.227

In terms of goodness-of-fit the performance of the earlier equation is superior and it is therefore adopted as the equation for the base money.

2.3 SIMULTANEOUS EQUATION ESTIMATES OF THE DEMAND FOR AND SUPPLY OF MONEY FUNCTIONS

The preferred functions of the demand for and supply of money and of high powered money were estimated using the two-stage least squares technique. But as the results show, there is little difference between the ordinary and two-stage least squares as far as the present model is concerned. They are presented below.

(i) DEMAND FOR MONEY (NARROW)

$$\log M_t = \underset{(2.3)}{-1.05} + \underset{(3.53)}{0.427} \log Y + \underset{(2.38)}{0.213}\, SDR \underset{(1.82)}{-0.086}\, TBR + \underset{(2.76)}{0.495} \log M_{t-1}$$

$\bar{R}^2 = 0.979$ h = -2.26 F(4,15) = 222 S.E. = 0.0886

(Note : Y is real income)

(i) SUPPLY OF NARROW MONEY

$$\log M_t = \underset{(0.62)}{-0.095} + \underset{(5.01)}{0.423} \log H_t + \underset{(6.78)}{0.631} \log M_{t-1}$$

$\bar{R}^2 = 0.993$ h = 0.854 F(2,17) = 1308 S.E. = 0.103

(iii) SUPPLY OF HIGH-POWERED MONEY

$$\log H_t = -2.46 + 0.67 \log Y_t + 0.45 \log H_{t-1}$$
$$(4.98) \quad (5.27) \qquad (3.93)$$

$$\bar{R}^* = 0.984 \quad h = 0.843 \quad F(2,17) = 604 \quad S.E. - 0.153$$

In some ways, the OLS estimates are better than those of the 2SLS estimates. No serial correlation was evident in the former but the latter yeild an h- value of less than -2 in the case of money demand. With a critical value of h at -1.645 at the 5% level, one cannot accept the null hypothesis of no serial correlation. For this reason, the OLS results are retained in each of the three cases.

This ends the econometric analysis of the demand for and supply of money. But this is only one way of analysing the money supply. Another alternative is the balance sheet approach to money supply determination which was indicated at the beginning of this chapter. This approach is adopted in the next section.

3. BALANCE SHEET APPROACH TO MONEY SUPPLY DETERMINATION

One of the conclusions of sections 2.2 and 2.3 above, given the weaknesses of the models estimated there, is that high-powered money (H) is the most important determinant of the money supply. The money supply (M) itself may be expressed as the product of high-powered money and the money multiplier (m) since m = M/H. The remaining part of this chapter is devoted to the investigation of H and m.

3.1 HIGH-POWERED MONEY

A useful way of analyzing high-powered money is by examining the balance sheet of the Central Bank. Following Zecher (1974, 1976), its assets (A) are classified into two : foreign reserves (F) and assets other than foreign reserves (OA). Similarly, the liabilities of the bank (L) are grouped into high-powered money and other liabilities (OL). The accounting identify, A = L, enables one to write

$$F + OA = H + OL \text{ or } H = F + (OA - OL)$$

which may be written as

$$H = F + D \qquad (2)$$

where

$$D = OA - OL \qquad (3)$$

and D is a measure of Central Bank credit to the domestic economy.

From (2) it is clear that factors which increase F or D also increase H. Eqn (3) also shows that, provided there are no offsetting changes in the other variables, an increase in OA (which comprises of such items as private and public secutiries, investments, loans and advances) or a decrease in OL (which is made up of state and Federal Government, foreign and other domestic deposits and other liabilities) leads to an increase in D and hence H. Therefore, it may be instructive to examine some of the items in greater detail. As a starting point, the balance sheet of the Central Bank of Nigeria is shown in Table 3.3.

Taking assets first, the table shows that in 1981 the largest item was government securities which formed 62% of the total. At 25% of total assets, foreign reserves constituted the second largest

TABLE 3.3 ASSETS AND LIABILITIES OF THE CENTRAL BANK OF NIGERIA AS AT 31 DECEMBER 1980 AND 1981

ASSETS (₦ M)

	1980	1981
Foreign Reserves	5469.1	2441.0
Government Securities	2859.3	6046.5
Treasury Bills	-	3404.0
Treasury Certificates	1590.9	1112.5
Others	1268.4	1529.1
Rediscounts	80.7	85.4
Treasury Bills and Certificates	1.5	6.2
Commercial Bills	79.2	79.2
Advances	450.3	565.7
Investments	226.8	265.5
Other Assets	271.2	305.3

LIABILITIES

High-Powered Money	4798.3	5026.1
Notes and Coins	3589.5	4347.7
Commercial Bank Deposits	1208.8	678.4
Other Liabilities	4559.1	4683.3
State Government Deposits	(224.8)	(143.1)
Federal Government Deposits	(1874.6)	(1442.3)
Foreign Deposits	(36.8)	(37.0)
Other Domestic Deposits	(1394.1)	(1038.4)
Capital plus Reserves	(67.0)	(91.0)
Others	(961.8)	(1931.5)
TOTAL ASSETS/LIABILITIES	9357.4	9709.4

item. However, this is an unusual development. The year saw an unprecedented increase in the Bank's holdings of Treasury Bills. It is therefore necessary to use the figures for 1980 which are more representative of past trend than those of 1981. When this is done, the relative importance of government securities and external reserves is reversed. More than half of the Bank's assets (58%) were held in foreign reserves while government securities amounted to less than a third (31%) of the assets. Together, these assets amounted to 89% of the total which compares with the figure of 87% for 1981. Bills discounted are particularly insignificant.

A further examination of the Bank's balance sheet shows that high-powered money was the largest liability both in 1980 (51.3%) and 1981 (51.8%). High-powered money, of course, consists mainly of currency in circulation (75 and 87% in 1980 and 1981 respectively). As a proportion of total liabilities, notes and coins amounted to 38% in 1980 and 45% in 1981. Other single items on the liability side of major importance include FG deposits (20% in 1980 and 15% in 1981) and other deposits (15 and 11% respectively).

The composition of the assets and liabilities of the Bank has undergone considerable changes since 1960. For instance, in that year the ratio of government securities to total assets was 1.9% while notes and coins amounted to 94%. The changes in the main items are shown in Appendix Tables 3.1 - 3.3.

The first two of these tables show that there was a tremendous

jump in many of the items in 1974. This was caused by the massive inflow of foreign exchange assets following the oil price increases that started late in 1973 (see Chart 6.1).

Given this review of the trend in main items of the balance sheet of the Central Bank, the next two subsections deal with the components of H identified in eqn (2).

3.1.1 DOMESTIC CREDIT CREATION IN NIGERIA

From eqn (3), a ceteris paribus increase in OA or decrease in OL will increase D. As a fraction of total assets/liabilities, OA has varied between 5.9% in 1960 to 79% in 1978 while OL rose from 4.7% in 1960 to 79.7% in 1974. They therefore need some closer examination.

Holding its liabilities constant, the Central Bank can increase domestic credit by purchasing private or public securities, re-discounting bills or making advances. Until 1974 the principal method by which the Central Bank of Nigeria (CBN) increased D from the asset side of its balance sheet was through the purchase of government securities. As Table A-3.3 shows, the ratio of government securities to total assets rose from 1.6% in 1962 to 59% in 1967. This was due mainly to the shortfall of expected foreign contribution to the First Plan mentioned in Ch. 1. and the financial requirements of the Civil War.

The favourable developments in the oil sector between 1974 and 1977 (Appendix 1; Table A -2.1) reduced or even eliminated the pressure on the CBN to invest in government securities,

hence their share in total assets plummeted from 20% in 1973 to 0.3% in 1974. But following the reduced earnings from the oil sector in the late 1970's owing to world oil glut of the period, the ratio of government securities to total assets climbed to 39% in 1978 and to 62% in 1981. Thus, domestic credit was conditioned to a large extent by the government's fiscal needs.

The second main way of increasing D while holding liabilities constant is through advances to the government and the private sector. In Nigeria, this is insignificant compared to government securities. Moreover, advances were made mainly to the government. Nevertheless advances constitute a source of credit to the economy.

Finally D increases when the CBN grants loans to commercial banks through the rediscounting of bills or advances on the security of some specified liquid assets (see Ch. 4, Section 1.1) . But this facility has not been used much (Ch. 4).

Table A - 3.2 shows that government and other deposits are the largest items of OL. Government deposits were stagnant until 1969 as the budget was in deficit during this time (Ch. 2). But like the other items, it jumped from ₦48.7 m in 1973 to ₦2125 m in 1974 because of the increased oil earnings.

Until 1980, other domestic deposits constituted a minor source of changes in domestic credit.

From this examination of other assets and liabilities of the CBN

domestic credit (as used here) is determined by the Central Bank, the Treasury, the commercial banks, and the private commercial sector. The accounts also shows that the Treasury exercises a predominant influence on D. Moreover, the CBN cannot take the initiative which must come from the other sectors. As such it does not have an absolute control over D. From the identity D = OA - OL, it is plain that the purchase of government securities (or any other asset) does not necessarily affect domestic credit and hence high-powered money. If, for example, the Central Bank purchases ₦1000 m worth of government securities, that item and government deposits in its balance sheet will increase by the same amount i.e. the increase in OA is exactly matched by an increase in OL. However, should the Treasury decide to reduce its deposits at the Bank, OL will fall while OA remains at the new higher level. D therefore increases by the fall in OL. The result will be an increase in currency or commercial bank reserves. But a loan to commercial banks increases D and high-powered money directly. This follows from the fact that the increase in an item of OA (loans and advances) is matched by an increase in commercial bank reserves which are part of high powered money. Since there is no change in OL, both D and H increase by the same amount. The commercial banks can then create new demand deposits of an amount equal to the product of the money multiplier and the amount of the loan and advances. The effect of a Central Bank loan to the private sector is the same if the loan is deposited with the commercial banks; otherwise, only high-powered money (currency) will increase.

Thus the initiative for changing domestic credit lies outside

the Central Bank in this setting : the commercial banks, the private sector or the Treasury must seek and use the Central Bank loans. Nevertheless, there are two ways in which the Central Bank can influence domestic credit through the commercial banks. First, it can alter its portfolio of domestically created assets through the sale and purchase of securities on the open market. Second, it can compel commercial banks to borrow from it by raising the statutory liquidity ratio sufficiently. These are two of the four main traditional instruments of monetary control and are discussed in greater detail in Ch. 4. Meanwhile, the second component of high powered money, foreign reserves, is discussed next.

3.1.2 THE FOREIGN COMPONENT OF HIGH-POWERED MONEY

High-powered money is Central Bank domestic credit plus foreign reserves, F. The level of reserves in year t, F_t, is equal to the level in the previous period, F_{t-1}, plus the change in reserves in the current period, F_t i.e.

$$F_t = F_{t-1} + \Delta F_t$$

F_{t-1} may be taken as given in any period so that F is completely determined by ΔF_t. But ΔF_t is identically equal to the balance of payments. Under a perfectly flexible exchange rate regime, ΔF_t is zero so that the level of foreign reserves remains fixed, say at $\overline{F}$. In this scenario, H is determined by domestic factors alone. In this regard, such an economy may be treated as a closed one. But as Nigeria was never under a flexible exchange rate regime during the review period, this line of argu-

ment is not pursued further.

Over a very wide range, there is no limit on the value of ΔF_t with a fixed exchange rate. The new high-powered equation is

$$H_t = F_{t-1} + \Delta F_t + D_t$$

A fall in ΔF_t leads to a fall in H, all other items remaining constant. There are many ways in which ΔF_t can fall. Under the Central Bank of Nigeria Act as subsequently amended, all foreign exchange assets of the Federation are centralized in the Bank. An individual who wants to buy foreign currencies (to pay for imports for example) applies to the Bank through his bank. Both the individual's deposits at his bank and those of his bank at the Central Bank are reduced by the resulting sale of foreign exchange. In addition, H falls.

Another way in which ΔF_t can change is through the government fiscal account. Under the existing institutional arrangements all foreign exchange earned from oil (over 90% of the total) accrues directly to the government. Therefore the inflow of foreign exchange increases the level of foreign reserves and government deposits by the amount of the inflow. There is thus no change in high-powered money as the increase in F is exactly offset by an increase in D : foreign exchange inflow is completely sterliized. It is monetized when the government reduces its deposits at the Central Bank (by increasing its expenditure) which lowers OL without affecting OA.

This shows that the effect of the balance of payments on high-powered money is determined by the government and the private

sector while the influence of the Central Bank on H is negligible (given the insignificance of interest rates in financial assets found above). The only other way the Central Bank can influence the money supply is through the money multiplier. The extent of its control over this quantity is examined below.

3.2 THE MONEY MULTIPLIER

As stated earlier, the money multiplier, m, is the ratio of the stock of money, M, to high-powered money, H:

$$m = M/H \Rightarrow M = mH$$

The aim of this section is to review the traditional multiplier approach to money supply determination.

The multiplier is made up of different components so that different definitions can be obtained by including more or less of these components. As the detailed derivation of m is available in many textbooks (e.g. Simpson (1976)) and other sources (e.g. Ajayi (1972), Ojo (1976), Oyejide (1974)), only the results are reported here.

Let M_1 be as defined previously and H_1 the sum of currency outside banks and commercial bank reserves. Then the associated multiplier is m_1 where

$$m_1 = \frac{1 + c}{r + c} \qquad (4)$$

where c is the currency-deposit ratio and r is the reserve deposit ratio. m_1 is therefore a function c and r i.e.

$$m_1 = f(c,r) \qquad (5a)$$

and

$$dm_1 = \frac{r-1}{(r+c)^2}\,dc - \frac{1+c}{(r+c)^2}\,dr \qquad (5b)$$

Since $0 \leqslant c,r < 1$, $f_1 < 0$ and $dm_1 < 0$. In practical terms, a rise in c or r reduces the value of the multiplier.

c is the outcome of the decisions of individuals to hold their money in currency or demand deposits. As such, it is determined by the portfolio behaviour of the non-bank public. Commercial banks choose the actual level of r while the Central Bank sets the required level of r.

Now let the money supply be defined more broadly to include savings plus time deposit (=quasi-money, QM). Then, given H_1,

$$m_2 = \frac{1+c+q}{r+rq+c} \qquad (6)$$

where q is the quasi-money-deposit ratio.

Another concept of high-powered money may be obtained by noting that in Nigeria Treasury Bills are reserve eligible assets (Ajayi, 1973a, p. 31). Then, given this expanded base (H_2)

$$m_3 = \frac{1+c}{r+c+t} \qquad \text{(Narrow Money)} \quad (7)$$

$$m_4 = \frac{1+c+q}{1+rq+c+t} \qquad \text{(Broad Money)} \quad (8)$$

where t is the ratio of Treasury Bills outside the CBN to demand deposits.

The components of the money multiplier are therefore c, r, q and t. The first two are definitely the most importand and are

considered briefly below.

3.2.1 THE CURRENCY-DEPOSIT RATIO

The currency deposit ratio is especially important in under-developed economies where, in general, currency forms a higher proportion of money supply than in more developed economies. Changes in the currency ratio are therefore more important in the former than in the latter. The ratio therefore needs a closer scrutiny.

As seen above, it is determined by the portfolio behaviour of the non-bank public which ultimately decides how its total money balances are to be split between currency and demand deposits. But its decision may be influenced by the Central and commercial banks through the opportunity cost of holding both forms of money balances discussed below. In this sense, one may say that the currency-deposit ratio is the outcome of the joint decisions of the Central and commercial banks, and the non-bank public.

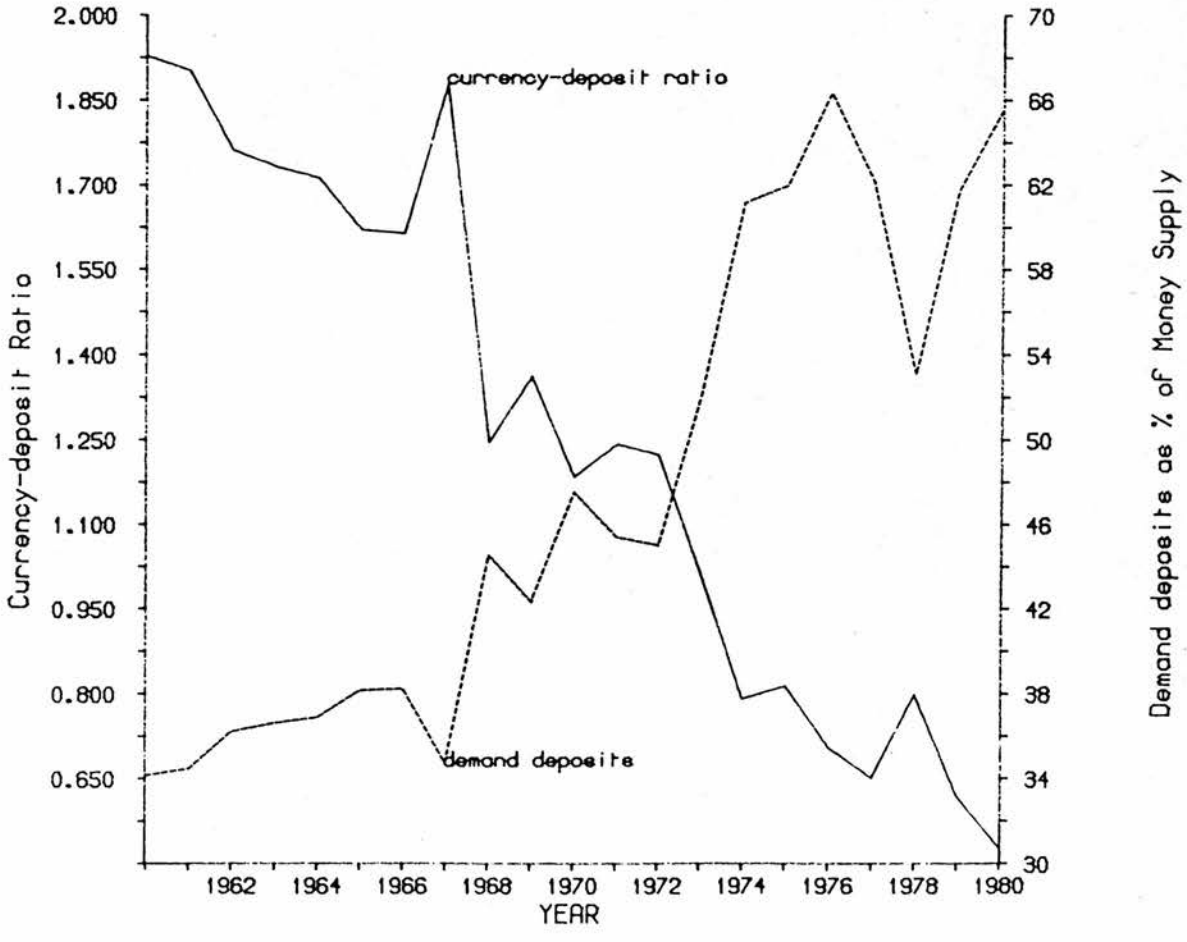
Many factors affect the way individuals hold their money balances. In the shortrun, a rise in real income is expected to affect the ratio except in the unlikely event where the income elasticities of the demand for currency and demand deposits are equal. There is reason to believe that the income elasticity of the demand for currency is, in fact, lower than that of demand deposits[17]. First, since demand deposits earn a negative rate of return (e.g. bank charges), there is a critical minimum level of money balances which makes the holding of demand deposits worthwhile, assuming that bank charges have a fixed element. Second, those who already

may find
operate chequing accounts/that the level of currency that would that would result from splitting the increase in money (necessary to finance the increase in income) equally between currency and demand deposits is higher than the desired level. In other words, 'rising income ... may convert practices of holding wealth and making payments from currency to deposits' (Cagan, 1965, p. 126). Another hypothesis relating the ratio to income is that the former may react positively to changes in the share of income going to labour (Diz, 1970, p. 110).

As both currency and demand deposits react in a similar manner to changes in the price level, the effect of inflation on the ratio may be approximated by zero. The opportunity cost of holding currency then is zero. But holding demand deposits instead of currency entails a sacrifice such as bank charges. In Nigeria there are other indriect costs e.g. the risk of bank failure (as happened in the 1950's (Brown, 1966, p. 25)) and the conversion of demand deposits which is a costly process in terms of time and effort. This opportunity cost, however defined, is thus expected to be positively related to c.

Other factors which have been suggested are familiarity with bank facilities (which is a function of bank facilities themselves), literacy (Ajayi, 1978, p. 61) and urbanization (Kaufman, 1966, p. 9). These (except perhaps urbanization which is double-edged) are expected to lead to a fall in the currency deposit ratio. Chart 3.1 indicates clearly that the ratio has been falling over time in Nigeria.

Chart 3.1: Currency-deposit Ratio and Ratio of Demand Deposits to Money



3.2.2 THE RESERVE-DEPOSIT RATIO

This is the second main determinant of the money multiplier. The observed reserve ratio r has two elements : the legal component r_l and excess liquidity ratio r_e. This gives

$$r = r_l + r_e \qquad (9)$$

The relation shows that the Contral Bank (which sets r_l) and the commercial banks (which select r_e) determine r jointly. In principle, the Central Bank can force commercial banks to shift their portfolio of assets in favour of government securities (which are reserve-eligible) by raising r_l and/or varying the composition of reserve-eligible assets.

In selecting r, commercial banks take r_l as well as the availability of profitable investment outlets into consideration. Even where investment outlets are unlimited, there is still the need to maintain excess reserves because of the high cost of an unexpected cash shortfall as described in detail in Simpson (1976, esp. p. 149). According to this analysis, the level of excess reserves may be related to the Central Bank discount rate and to the cost of borrowing from other banks.

For these reasons, banks always keep excess reserves. In Nigeria, an additional reason is the strong seasonal variation in the demand for money, and loans and advances (Okigbo, 1981, p.). Finally, interest rates in Nigeria have been very low (see Ch. 4). In such a situation, banks might prefer to work with excess liquidity to expanding earnings assets. Actual end of quarter liquidity ratios are presented graphically in Chart 3.2. The statutory

Chart 3.2: End of Quarter
Commercial Bank Liquidity Ratio

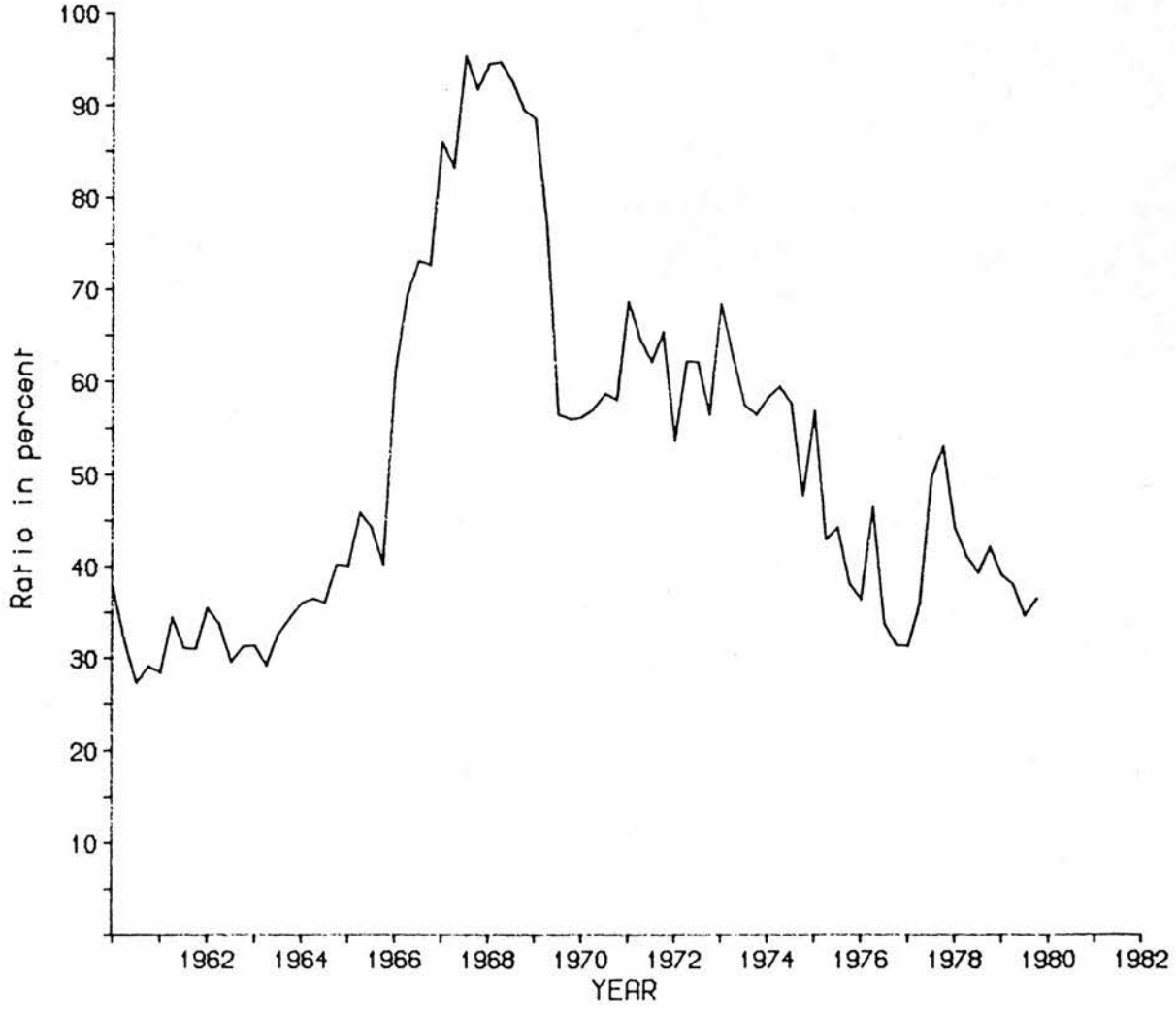
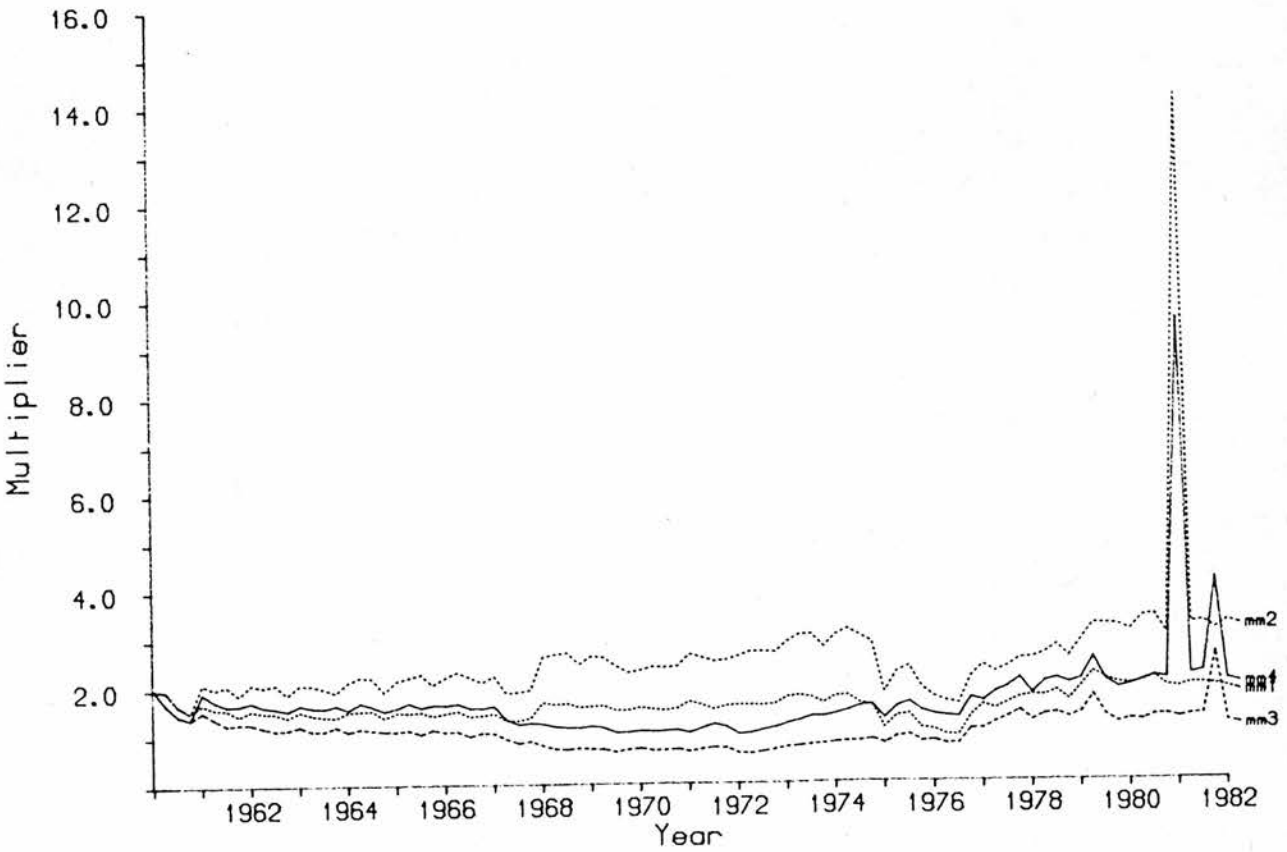


Chart 3.3 : Quarterly Money Multipliers 1960-81



liquidity ratio remained at 25% throughout the entire period. Excess liquidity therefore varied between 2.3% in 1962 III to 70.4% in 1969 III as the actual ratio was 27.3% and 95.4% respectively.

3.2.3 FINAL REMARKS ON THE MONEY MULTIPLIER

When the money supply is expressed as M = mH it gives the impression that m is constant so that all variations in M are attributable to H. Multiplier analysis also gives one the impression that banks work to a constant reserve ratio. This implicitly assumes that they face an insatiable demand for loans and advances. But as shown above, the constant reserve ratio assumption is contradicted by the historical evidence. Some of the reasons for the variability of the ratio have already been given. In addition, banks may work with excess reserves (1) if the increase in reserves is deemed to be temporary (2) in anticipation of a surge in the demand for loans or cash or (3) if there is deficient demand for loans and advances. In Nigeria, (3) is usually due to the absence of suitable collateral security. Finally, another implicit assumption of multiplier analysis is a constant currency-deposit ratio. This has been shown above to be negatively trended in Nigeria.

Taken together these factors suggest that m should not be treated as a constant. End of year values of m_1 - m_4 between 1960 and 1981 are shown in Table A - 3.1 while Chart 3.3 presents the end of quarter values. All the multipliers display an element of positively trend. Summary measures of variability in the various multipliers are set out below:

TABLE 3.4 : SUMMARY MEASURES OF THE TREND IN THE MONEY MULTIPLIERS, 1960 - 80

	m_1	m_2	m_3	m_4
Mean	1.54	2.36	1.24	1.89
Standard deviation, σ	0.19	0.39	0.52	0.78
σ as % of Mean	12.4	16.7	41.6	41.2

Column 1 shows that m_1 has been strikingly stable around its mean of approximately 1.5 since 1960. The table above confirms this by showing a standard deviation of only 0.19 which is one-eighth of the mean. m_1 displays no consistent trend. Similar comments apply to m_2 although in this case a slight upward trend is discernible as it exhibits a slightly greater variability (see above table).

m_3 shows a clear trend. In the first six and last seven years, its value exceeded unity while in the intermediate years (except 1974), its value was below unity. Furthermore, it displays greater variability than either m_1 or m_2. On the whole, m_3 tended to rise over time. Apart from the absence of a dramatic pattern, m_3 and m_4 behaved in a similar fashion.

The behaviour of the various multipliers has some implications for monetary control. Although the Central Bank cannot control high-powered money effectively, it may still be interested in predicting the money supply or the multiplier. It would therefore have to select the multiplier to use for the purpose. In this regard, the summary table suggests that m_1 and m_2 should be the

appropriate multipliers because they are the most stable. m_1 is superior to all others while m_2 follows closely. The least stable is m_3.

Ojo, in an article covering a shorter period (1962 - 73) (Ojo, 1976), has also examined the issue of which multipliers are the most useful for predictive purposes. His method is regression analysis. The general form of the estimating equation is

$$m_{it} = H_{kt} + m_{it-1} + \sum_{j=2}^{4} S_j \; i \qquad i = 1, \ldots, 4 \qquad k = 1, 2$$

where S_j is a seasonal variable with value 1 if the observation relates to quarter j and zero otherwise, and other variables are as previously defined and all observations are quarterly. His conclusion is that m_1 and m_4 (which are defined as in the present analysis except that time deposits are excluded from broad money) predict best. This conclusion is at variance with that of the present exercise with respect to m_2 and m_4. However, the difference can be explained in terms of the definition of high powered money. While H has been defined here as the sum of currency in circulation and commercial and foreign deposits at the Central Bank of Nigeria he uses H which consists of the first two items plus 'other deposits' as shown in the balance sheet of the Central Bank. If this definition is accepted, the summary table above is altered as follows:

	m_1	m_2	m_3	m_4,
Mean	1.45	2.21	0.995	1.49
σ	0,25	0.43	0.23	0.26
σ as % of Mean	17.5	19.3	23.5	17.7

which shows that m_1 and m_4 are superior.

The usefulness of being able to predict a variable which cannot be controlled is that it may be related to some variables of interest and which can be controlled. Such variables can then be used to predict values of the policy variables. But the fact still remains that in Nigeria, the money multiplier is outside the control of the authorities.

4 SUMMARY AND CONCLUSION

The principal objective of this chapter has been to provide some theoretical information that would facilitate the appraisal of monetary policy in Nigeria.

The major concern of the chapter was, therefore, with the analysis of the demand for and supply of money. The main conclusions of the demand analysis are summarized in Section 2.1.3. The analysis yielded results which contradict well-established hypotheses. For instance, according to David Laidler,

> 'there is an overwhelming body of evidence in favour of the proposition that the demand for money is netatively related to the rate of interest. Of all the issues in monetary economics, this is the one that appears to have been settled most decisively'
>
> (Laidler, 1977, p. 130)

The results obtained in this chapter show that this assertion needs to be qualified. The interest rate variable did not have the expected sign and where it did, it was not significantly different from zero. A possible explanation offered is the regulated nature of all interest rates (to be discussed in the next chapter). The interest rate behaved in a similar fashion

in the econometric analysis of the supply of money. An important consequence of this phenomenon is that interest-rate-related policies might not work in Nigeria. A high degree of instability was also noticed in the demand for money. This also has the effect of weakening the effectiveness of monetary policy.

In addition to the econometric method, the money supply process was also analysed by the balance sheet approach. It was shown that the Central Bank of Nigeria has limited influence over high powered money, the money multiplier and, consequently, the stock of money, i.e. these variables are endogenous with respect to the Bank. High powered money is determined by reserve flows and the Treasury while the multiplier is determined by the portfolio behaviour of the Central and commercial banks and the non-bank public. Reserve flows are, of course, exogenous to the Central Bank while the extent of its monetization is determined by the Treasury given that the government debt is monetized (discussed further in Ch. 4).

Given this theoretical background, the next task that is undertaken is the appraisal of monetary policy.

FOOTNOTES : CHAPTER THREE

1. Consider, for example, the sympsium on the book in the November 1936 issue of the QJE, especially papers by Robertson (1936) and Viner (1936), and Keynes' reply (Keynes, 1937) as well as Friedman (1948).

2. Editors' Introduction to Griffiths and Wood (1981), pp. 2 - 3.

3. Examples are Griffiths and Wood (1981), and the sumposium on the subject in the Canadian Journal of Economics, 1979 involving Sparks (1979), White (1979) and Fortin (1979).

4. This list is taken from Foot (1981), p. 15.

5. Most financial institutions in Nigeria started initially as foreign subsidiaries of British firms (Brown, 1966; Okigbo, 1981). The first financial legislation (passed in 1952) was based on the recommendations of a report by G D Paton of the Bank of England. The Central Bank Act of Nigeria Act, 1958 was essentially the draft ordinance drawn up by J.B. Loynes, also of the Bank of England. Before, J.L. Fisher, also of the Bank of England, had reported on the establishment of a central bank in Nigeria (Fisher 1952). It is common knowledge that both Fisher and Loynes based their recommendations on their experience at the Bank of England (Nwankwo, 1980, pp. 5 - 6). Finally, the Governor of the CBN for the first three years was Roy Fenton who was on secondment from the Bank of England. Clearly British monetary policy affected Nigeria's monetary policy in the early years.

6. These include (Ajayi (1974), Akinnifesi and Phillips (1978), Ghosh (1981), Iyoha (1976), Ojo (1976) and Teriba (1973, 1974).

7. There are two exceptions : Akinnifesi and Phillips (1978) which is reviewed below and Ghosh (1981). However, Ghosh is concerned primarily with the supply of money. He estimates a demand function for three monetary aggregates : M_1 and M_2 as defined previously, and a third which he defines as M_2 less time deposits. The independent variables in each case are an income measure and an undefined 'interest rate on deposit' as well as the lagged dependent variable. These functions were estimated by OLS 2SLS and 3SLS. It turns out that only the three-stage least squares estimates of M_1 and M_2 yield a statistically significant interest rate coefficient. However, the use of the index of industrial production as a proxy for income in order to be able to use quarterly data tends to reduce the reliability of his results.

8. In transactions theories of the demand for money, one of the most widely used measures of the value of trans-

actions, and hence the scale variable, is some measure of the level of current output, usually the GDP or GNP. But as it well known neither is a perfect measure of the value of transactions (Goldfeld, 1973). The inadequacy of national income as a proxy for the value of transactions has led to the suggestion of alternative ones. For example, Lieberman (1977) has proposed bank debits; Goldfeld (1976) the ratio of GNP to previous peak GNP in addition to current GNP.

While transactions theories emphasize the medium of exchange role of money, asset theories take the view that money is primarily a store of wealth. The latter therefore argue that the relevant scale variable is not measured or observed income but permanent income in Laumas and Spencer (1980) in addition to human and non-human wealth (e.g. Friedman (1956, 1959)).

The transactions - asset argument has important implications for policy because the controversy over the crowding out of private investment by public expenditure seems (see Ch. 2) to revolve around whether there are significant wealth effects in the holding of money. It has been suggested that if wealth is substantial in the demand for money function then there may be significant crowding out in which case fiscal policy will be relatively ineffective while monetary policy will be, by comparison, more effective (Blinder and Solow, 1973; Friedman, 1978). The asset theory is not tested here because data on some relevant variables (e.g. the capitalized value of the public debt as used by Marothia and Phillips (1982) for Canada) are not available and the number of observations is too small to permit the usual calculation of permanent income.

The return on various financial assets has been used as a measure of the opportunity cost of holding wealth in monetary assets but there is still substantial disagreement on which rate of interest is most appropriate. The portfolio approach suggests that different interest rates be used in conjunction. For Nigeria, this approach has been followed by Teriba (1974) and Akinnifesi and Phillips (1978). However, this increases the risk of multicollinearity and in practice only one or two are used together. For the US in particular, the shortterm commercial paper rate is favoured. (Goldfeld's 1973 paper appears to have made this the 'standard' rate. See also Goldfeld (1976), Garcia and Pak (1979) and Laumas and Spencer (1980)). Other variables besides interest rates have been proposed as proxies for the opportunity cost of holding money (e.g. dividend-price ratio and long-term bond rate by Hamburger (1977) and the rate of growth of nominal income by Friedman and Schwartz (1982, pp. 274 - 80). For developing countries, the rate of inflation is now widely used, see below.

9. See Footnote 8 above.

10. For instance all the equations reviewed by Judd and Scadding were estimated this way. See Judd and Scadding (1982, pp. 996 - 97).

11. $\bar{R}^2$ is the corrected coefficient of multiple determination, D-W is the Durbin-Watson statistic, h is Durbin's h statistic (for equations containing the lagged dependent variable), and figures in brackets are the t- ratios of the respective coefficients.

12. In eqn (1a) m_{t-1} may be defined as $(M/P)_{t-1}$ where M is nominal money balances and P is the price level. The adjustment mechanism on which this is based has been questioned and two alternatives have been proposed. Hacche (1974) and Goldfeld (1976) and others believe that inflation is a real phenomenon so that $m_t = M_{t-1}/P_t$. But Laidler (1982) who subscribes to the monetary theory of inflation prefers to define it as $m_t = M_t/P_{t-1}$. See Hetzel (1984), p. 186.

13. The two cases are illustrated with the following examples:

$$\log m_{1t} = \underset{(2.4)}{3.72} + \underset{(0.197)}{0.048} \log y_t - \underset{(0.123)}{0.0075}\ TBR$$

$\bar{R}^2 = -0.129$, D-W = 1.205, F(2,15) = 0.026, rho = 0957
rho t- statistic = 14.0

$$\log m_{1t} = \underset{(3.6)}{-1.4} + \underset{(3.7)}{0.42} \log y_t + \underset{(2.2)}{0.115}\ SDR + \underset{(5.1)}{0.645} \log m_{t-1}$$

$\bar{R}^2 = 0.975$, F = 190, rho = -0.011, rho t- statistic = 0.049

14. Other studies in which this procedure has been followed include Aghelvi et al (1979), Morgan (1979), Crockett (1980), Eggertsson (1982) and, for Nigeria, Ojo (1974).

15. Stability of the demand for money function over time is regarded as important because if the relationship between the demand for money and its determinants breaks down, policy makers become unsure of future demand. In that case it becomes difficult also to project the link between money and important macroeconomic variables such as output, prices and interest rates. (Hafer and Hein, 1979; Judd and Scadding, 1982 p. 993). Accordingly, using the Chow test mentioned in Ch. 2, some stability tests were carried out here. From the results, all the functions considered above display strong evidence of structural instability. This is not surprising in view of the disappointing results reported above.

16. In an attempt at isolating the effect of the civil war as far as possible, the same equation was re-estimated with the war years and the dummy variable excluded. The coefficient estimates and the levels of significance were hardly altered.

17. The estimates of the demand for the components of money show that the shortrun income elasticity for the demand for currency is 0.77 while that of demand deposits is 1.16.

Appendix Table 3.1
SELECTED ASSETS OF THE CENTRAL BANK OF NIGERIA
(MILLIONS OF NAIRA)

Year	Foreign Reserves	Government Securit.	Other Assets	Domestic Credit	Total
1960	155.2	3.2	9.7	1.9	164.9
1961	151.5	9.0	25.9	15.5	177.4
1962	153.3	3.1	35.7	24.2	189.0
1963	129.0	34.5	69.4	56.5	198.4
1964	155.0	37.1	78.9	62.0	233.9
1965	165.2	56.8	73.9	55.3	239.1
1966	142.7	92.8	120.9	97.2	263.6
1967	72.3	151.0	183.4	154.5	255.7
1968	75.9	86.6	209.4	129.8	285.3
1969	93.2	93.7	264.0	184.7	357.2
1970	143.6	169.2	308.7	245.3	452.3
1971	279.9	231.4	348.1	113.0	628.0
1972	243.6	132.3	302.7	185.3	546.3
1973	378.0	134.0	300.0	123.7	678.0
1974	3446.5	9.7	220.3	-2702.4	3666.8
1975	3448.5	313.0	655.9	-1589.1	4104.4
1976	3059.3	502.4	982.4	-614.1	4041.7
1977	2521.0	370.0	2277.6	271.6	4798.6
1978	1078.5	1999.1	4050.6	1820.1	5129.1
1979	3063.7	2483.8	3500.7	19.7	6564.4
1980	5469.1	2859.3	3888.3	-670.8	9357.4
1981	2441.0	6046.5	7268.4	2585.1	9709.4

SOURCE OF TABLES A-3.1 to A-3.9:
CENTRAL BANK OF NIGERIA, ECONOMIC AND FINANCIAL REVIEW, VARIOUS ISSUES.

Appendix Table 3.2
SELECTED LIABILITIES OF THE CENTRAL BANK
IN MILLIONS OF NAIRA

Year	Currency	High-Powered	Federal deposits	Other Liabilities
1960	154.2	157.1	2.1	7.8
1961	160.2	167.0	2.3	10.4
1962	174.6	177.5	1.2	11.5
1963	183.3	185.5	1.6	12.9
1964	214.7	217.0	1.4	16.9
1965	217.9	220.5	1.3	18.6
1966	236.5	239.9	1.3	23.7
1967	221.0	226.8	1.5	28.9
1968	202.2	205.7	2.3	79.6
1969	273.2	277.9	4.2	79.3
1970	370.4	388.9	3.4	63.4
1971	386.4	392.9	4.6	235.1
1972	414.0	428.9	10.0	117.4
1973	486.3	501.7	9.3	176.3
1974	638.7	744.1	2087.9	2922.7
1975	1155.5	1859.4	1595.1	2245.0
1976	1540.0	2445.2	861.3	1596.5
1977	2162.6	2992.6	404.5	2006.0
1978	2381.7	2898.6	582.1	2230.5
1979	2703.4	3083.4	1438.9	3481.0
1980	3589.5	4798.3	1874.6	4559.1
1981	4347.7	5026.1	1442.3	4683.3

Appendix Table 3.3
SELECTED ASSETS OF
THE CENTRAL BANK OF NIGERIA
AS % OF THE TOTAL

Year	External Assets	Govt. Sec.	Other Assets
1961	85.4	5.1	14.6
1962	81.1	1.6	18.9
1963	65.0	17.4	35.0
1964	66.3	15.9	33.7
1965	69.1	23.8	30.9
1966	54.1	35.2	45.9
1967	28.3	59.0	71.7
1968	26.6	30.4	73.4
1969	26.1	26.2	73.9
1970	31.7	37.4	68.3
1971	44.6	36.8	55.4
1972	44.6	24.2	55.4
1973	55.8	19.8	44.2
1974	94.0	0.3	6.0
1975	84.0	7.6	16.0
1976	75.7	12.4	24.3
1977	52.5	7.7	47.1
1978	21.0	39.0	79.0
1979	46.7	37.8	53.3
1980	58.4	30.6	41.6
1981	25.1	62.3	74.9

Appendix Table 3.4
SELECTED LIABILITIES OF
THE CENTRAL BANK OF NIGERIA
AS % OF THE TOTAL

Year	Currency	Base Money	Fed. Dep.	Other Liabilities
1960	93.5	95.3	1.3	4.7
1961	90.3	94.1	1.7	5.9
1962	92.4	93.9	1.5	6.1
1963	92.4	93.5	1.3	6.5
1964	91.8	92.8	1.7	7.2
1965	91.1	92.2	1.2	7.8
1966	89.7	91.0	2.0	9.0
1967	86.4	88.7	1.5	11.3
1968	70.9	72.1	1.4	27.9
1969	76.5	77.8	3.1	22.2
1970	81.9	86.0	2.6	14.0
1971	61.5	62.7	2.2	37.4
1972	75.8	78.5	4.2	21.5
1973	71.7	74.0	7.2	26.0
1974	17.4	20.3	58.0	79.7
1975	28.2	45.3	45.7	54.7
1976	38.1	60.5	22.5	39.5
1977	45.1	58.2	9.1	41.8
1978	46.4	56.5	13.3	43.5
1979	41.2	47.0	25.3	53.0
1980	38.4	51.3	22.4	48.7
1981	44.8	51.8	16.3	48.2

TABLE A-3.5 **MONEY MULTIPLIERS: NARROW MONEY, CONVENTIONAL BASE MONEY**

YEAR	QUARTER			
	1	2	3	4
1960	2.02	1.97	1.67	1.53
1961	1.70	1.60	1.58	1.46
1962	1.56	1.51	1.50	1.42
1963	1.54	1.47	1.43	1.42
1964	1.53	1.54	1.55	1.41
1965	1.50	1.50	1.51	1.44
1966	1.48	1.54	1.41	1.44
1967	1.47	1.33	1.33	1.38
1968	1.69	1.65	1.67	1.60
1969	1.61	1.63	1.54	1.54
1970	1.59	1.55	1.53	1.56
1971	1.70	1.63	1.53	1.60
1972	1.62	1.62	1.61	1.63
1973	1.77	1.81	1.76	1.65
1974	1.78	1.79	1.64	1.58
1975	1.12	1.36	1.40	1.10
1976	1.06	0.96	0.95	1.35
1977	1.57	1.49	1.60	1.72
1978	1.76	1.74	1.84	1.65
1979	1.93	2.22	2.09	1.99
1980	1.97	2.02	2.11	1.92
1981	1.89	1.97	1.97	1.94

TABLE A-3.6 **MONEY MULTIPLIERS: BROAD MONEY, CONVENTIONAL BASE MONEY**

YEAR	QUARTER 1	2	3	4
1960	2.02	1.97	1.67	1.53
1961	2.12	2.00	2.08	1.88
1962	2.10	2.05	2.10	1.89
1963	2.09	2.08	2.02	1.93
1964	2.14	2.25	2.22	1.93
1965	2.16	2.23	2.29	2.08
1966	2.22	2.33	2.23	2.12
1967	2.25	1.89	1.92	1.96
1968	2.63	2.68	2.72	2.49
1969	2.65	2.62	2.45	2.31
1970	2.35	2.43	2.41	2.43
1971	2.67	2.60	2.52	2.55
1972	2.62	2.71	2.71	2.70
1973	2.92	3.06	3.07	2.81
1974	3.05	3.17	3.03	2.89
1975	1.85	2.26	2.39	1.94
1976	1.75	1.66	1.60	2.16
1977	2.40	2.25	2.36	2.52
1978	2.54	2.62	2.79	2.55
1979	2.89	3.23	3.21	3.19
1980	3.08	3.36	3.40	3.00
1981	14.16	3.22	3.25	3.09

TABLE A-3.7 **MONEY MULTIPLIERS: NARROW MONEY, EXPANDED BASE MONEY**

YEAR	QUARTER 1	2	3	4
1960	2.02	1.70	1.47	1.40
1961	1.55	1.40	1.27	1.30
1962	1.29	1.21	1.15	1.17
1963	1.24	1.14	1.14	1.23
1964	1.12	1.18	1.15	1.12
1965	1.12	1.15	1.06	1.15
1966	1.10	1.11	1.01	1.08
1967	1.07	0.95	0.86	0.90
1968	0.81	0.74	0.72	0.75
1969	0.73	0.73	0.67	0.72
1970	0.75	0.70	0.70	0.72
1971	0.67	0.72	0.75	0.73
1972	0.63	0.61	0.65	0.69
1973	0.75	0.76	0.79	0.80
1974	0.83	0.84	0.85	0.88
1975	0.79	0.93	0.96	0.83
1976	0.84	0.78	0.78	1.08
1977	1.08	1.21	1.32	1.44
1978	1.24	1.36	1.38	1.30
1979	1.39	1.75	1.34	1.18
1980	1.24	1.23	1.32	1.33
1981	1.27	1.33	1.34	2.61

Note: Expanded base money = currency outside banks plus commercial bank reserves plus treasury bills (less central bank holding{ux).

TABLE A-3.8 **MULTIPLIERS: BROAD MONEY, EXPANDED BASE MONEY**

YEAR	QUARTER			
	1	2	3	4
1960	2.02	1.70	1.47	1.40
1961	1.92	1.75	1.66	1.67
1962	1.73	1.64	1.61	1.55
1963	1.68	1.62	1.60	1.67
1964	1.57	1.72	1.64	1.54
1965	1.60	1.70	1.61	1.66
1966	1.65	1.69	1.59	1.59
1967	1.63	1.35	1.25	1.28
1968	1.25	1.20	1.17	1.17
1969	1.20	1.17	1.07	1.08
1970	1.10	1.09	1.11	1.12
1971	1.05	1.14	1.23	1.17
1972	1.01	1.03	1.10	1.15
1973	1.23	1.29	1.37	1.37
1974	1.42	1.49	1.57	1.60
1975	1.31	1.55	1.64	1.46
1976	1.39	1.35	1.32	1.72
1977	1.65	1.84	1.94	2.12
1978	1.79	2.04	2.10	2.00
1979	2.09	2.53	2.06	1.89
1980	1.94	2.04	2.13	2.08
1981	9.52	2.17	2.22	4.16

TABLE A-3.9 **END OF YEAR MONEY MULTIPLIERS**

YEAR	BASE MONEY			
	CONVENTIOANAL		EXPANDED	
	M1	M2	M1	M2
1960	1.53	1.53	1.40	1.40
1961	1.46	1.88	1.30	1.67
1962	1.42	1.89	1.17	1.55
1963	1.42	1.93	1.23	1.67
1964	1.41	1.93	1.12	1.54
1965	1.44	2.08	1.15	1.66
1966	1.44	2.12	1.08	1.59
1967	1.38	1.96	0.90	1.28
1968	1.60	2.49	0.75	1.17
1969	1.54	2.31	0.72	1.08
1970	1.56	2.43	0.72	1.12
1971	1.60	2.55	0.73	1.17
1972	1.63	2.70	0.69	1.15
1973	1.65	2.81	0.80	1.37
1974	1.58	2.89	0.88	1.60
1975	1.10	1.94	0.83	1.46
1976	1.35	2.16	1.08	1.72
1977	1.72	2.52	1.44	2.12
1978	1.65	2.55	1.30	2.00
1979	1.99	3.19	1.18	1.89
1980	1.92	3.00	1.33	2.08
1981	1.94	3.09	2.61	4.16

CHAPTER FOUR

MONETARY POLICY II : APPRAISAL

INTRODUCTION

The previous chapter was designed to provide the theoretical background to the appraisal of monetary policy in Nigeria which is the subject matter of this chapter. But before considering the actual operation of monetary policy it is necessary to describe the milieu in which monetary policy is conducted in Nigeria. This is because policy-making and execution do not take place in a vacuum. In the specific case of monetary policy, the financial environment influences the range of issues selected for attention (i.e. what the authorities expect of monetary policy), the feasibility of particular weapons, and the effectiveness of policy in general. Consider, for example, that group of countries often lumped together under the umbrella term 'developing countries' of which Nigeria is one. The financial structure of these countries is so different from that of developed countries (in terms of the type and range of financial institutions and services available and their comparative importance) that it is unlikely for the same set of instruments to work equally well in the two. Even among countries in the same group, or even in the same country over time, there are significant differences. As an illustration of the latter case, one may cite the following: Nigeria had no 'monetary authorities' before 1959; there was no money market (conventionally defined) before the first issue of Treasury Bills in 1960; and a capital market came into being only with the establishment of the Lagos Stock Exchange in 1962. Therefore, discretionary monetary policy was impossible before

1959 while the tool of open market operations was clearly inapplicable before 1960. Similarly, the following may serve to illustrate the differences among countries in the same group. The weapon of open market operations was a main tool of monetary management in the UK and US but it was of little importance in W. Germany, at least before 1970 (Courakis, 1977, p. 23).

Constitutional provisions also condition the choice of monetary policy instruments. As will be seen later, the main instrument of monetary control in Nigeria is selective regulation of commercial bank activities. The regulation takes many forms : a ceiling on permissible increases in total credit to the economy; the distribution of aggregate credit among the various sectors of the economy; and the number and location of bank offices. These powers are conferred on the Central Bank by law. But, again, in West Germany, the Bundesbank has no such powers (Courakis, 1977, p. 17) and so the tool is not feasible there.

For these reasons, the institutional framework for monetary policy in Nigeria is discussed in some detail. The relative importance of the main financial institutions with emphasis on the Central and commercial banks is considered in the first section. Constitutional provisions which affect the ability of the Central Bank to use certain tools are also discussed.

Then the actual operation of monetary policy is examined. First, the problems at which monetary policy was directed are set out. Then the conduct of policy is considered. The discussion is organized around the techniques of monetary control. By dis-

cussing policy in terms of the weapons of control, it will become clear why some tools were used and others were not attempted. This, in turn, will shed some light on what conditions are required to improve the performance of policy. Another topic that is discussed is interest rate policy. The annual rate of growth of narrow money M_1 accelerated from 17.8% in 1973 to 45.5% in 1974 and to 84.3% in 1975. Corresponding figures for M_2 were 20.1, 47.1 and 75.3% while, for inflation, they were 5.7, 12.5 and 33.7%. Yet, the predominant interest rates were revised downward in April 1975. A critique of interest rate policy in general is provided in this section.

1. THE FINANCIAL SYSTEM

In discussing the financial system, it is useful to distinguish between the 'organized' and 'unorganized' markets (Wai, 1956, 1957). The distinction being made here is similar to the concept of a 'dual economy' in the development literature according to which a modern, capitalist sector exists side by side with a traditional, subsistence sector with little contact between the two. The 'unorganized'sector comprises ~~of~~ all the institutions listed in Table 3.1. The unorganized sector, on the other hand, is made up of money lenders, contribution clubs and other lenders not yet referred to.

1.1 THE FORMAL FINANCIAL MARKETS

There are now many textbooks on the modern sector of the Nigerian financial system (e.g. Brown (1966), Ojo (1976), Nwankwo (1980), Okigbo (1981), and Ojo and Adewunmi (1982)) while valuable information is available from other sources (e.g. Olakanpo

(1963, 1965), Teriba (1969) and Udo-Aka (1971)). But the traditional sector of the financial system is hardly ever discussed. Given the abundance of information on the former, the well-worn path is avoided in this study by concentrating on the unorganized or informal sector. However, relevant facts on the formal market will be highlighted.

The modern financial system of Nigeria comprises of the monetary financial institutions (i.e. the Central and commercial banks) and a number of non-monetary institutions. All these perform a common function which takes many forms : financial intermediation. In the first place, the monetary institutions create the money which is used in transactions and therefore provides a payments mechanism. This feature places them at the centre of the financial system. Secondly, the financial institutions as a whole provide the economy with financial assets which readily can be converted into money as required with minimum loss of value, thus enabling the economy to operate on a lower stock of cash than would have been possible. Furthermore, most financial institutions perform the function of mobilizing savings. This aspect is of special importance to a developing country like Nigeria but is also important in any other economy because, in addition, they also help to transfer funds from surplus to deficit sectors of the economy. A great deal of time would be wasted if all those who required funds had to negotiate directly with those who had funds surplus to their requirements. Another valuable function performed by some financial institutions is the insurance of certain risks of the society.

The list below gives an idea of the relative importance of the various financial institutions in Nigeria.

TABLE 4.1 : ASSETS OF FINANCIAL INSTITUTIONS AS AT 31 DEC. 1980 (PER CENTAGE SHARES IN THE TOTAL)

1.	Central Bank of Nigeria		33.2	
2.	Commercial banks		57.9	
	Total, monetary			91.1
3.	Merchant Banks		3.6	
4.	Federal Savings Bank		0.0	
	Total, Banks			94.7
5.	Mortgage Institutions		1.2	
	Federal Mortgage Bank	1.2		
6.	Insurance Companies		0.6	
7.	National Providend Fund		1.2	
8.	Development Banks:		2.3	
	Nigerian Industrial Development Bank	1.0		
	Nigerian Agric. and Co-op Bank	0.9		
	Nigerian Bank for Commerce and Industry	0.5		
	Total, Non-banks			5.4
	GRAND TOTAL (MILLION NAIRA)			28,222.4

SOURCE: CENTRAL BANK OF NIGERIA, ANNUAL REPORT, 1980

The amount of savings collected determines to a large extent the amount which financial institutions can lend to the final

users of funds. Table 4.2 further demonstrates the superiority of the commercial banks.

TABLE 4.2 : SAVINGS DEPOSITS OF THE FINANCIAL INSTITUTIONS, END OF 1980

	MILLION NAIRA	%
Commercial Banks	5 163.2	89.6
National Provident Fund	340.4	5.9
Merchank Banks	219.7	3.8
Federal Mortgage Bank	32.5	0.6
Federal Savings Bank	7.3	0.1
TOTAL	5 763.2	100

SOURCE : CENTRAL BANK OF NIGERIA, ANNUAL REPORT, 1980

Consequently, the Central and commercial banks are emphasized. The Central Bank is taken up first.

1.1.1 THE MONETARY AUTHORITIES

The Central Bank of Nigeria (CBN) which, together with the Federal Ministry of Finance, constitutes the monetary authorities was established in July 1959. Before then there was no monetary policy making body. The West African Currency Board (which issued a common currency for the Gambia, Ghana, Nigeria and Sierra Leone until each of these countries established its own central bank) had no control over the money supply which completely determined by / the balance of payments (Mars, 1948, p. 186.)

The Act establishing the CBN gave the Bank all the traditional powers of a central bank, including the regulation of commercial bank activities through the setting and varying of the liquidity ratio, and supervision. The Act was amended in 1962, 1968 and 1970. Relevant provisions of the law will be pointed out in the course of the discussion. One of these provisions which is especially relevant for the present purpose is the position of the Bank in relation to the government. It is therefore discussed in some detail.

1.1.1.1 CENTRAL BANK - GOVERNMENT RELATIONSHIP

The Bank is statutorily independent of the government. According to the Central Bank Act, policy and general administration are the responsibility of the Board of Directors of the Bank. Civil servants and members of the Federal and state legislature are ineligible for membership of this board.

Although the statute excludes government representation from the Bank, there are some channels of contact. For instance, the 1958 Act has provision for an Advisory Committee composed of the Federal minister of Finance, the Minister of Finance in the regions, the Governor and the Deputy Governor of the Bank. The Central Bank of Nigeria (Amendment) Decree No. 4 of 1970 however, abolished this Committee. Another channel of communication between the Bank and the Government is that Section 3(i) of the Central Bank of Nigeria (Amendment) Decree No. 3 of 1968 requires the Bank to 'keep the Commissioner (i.e. Federal Minister of Finance) informed of the monetary and banking policy

pursued or intended to be pursued'. Contact is also maintained through the requirement that the Bank should submit an annual report to the Commissioner within two months of the end of each financial year. In addition, the Bank is required by law to prepare and submit to the Commissioner returns on the 15th and last days of each month. Finally, the Commissioner of Finance has access to all the books of the Bank and may direct the Director of Federal Audit to examine and report on them.

In spite of these provisions, the Central Bank statute makes it clear that the Bank is independent of the Ministry of Finance in the performance of its duty which includes the formulation and execution of monetary and credit policy. The Bank need only inform the Commissioner of its activities and if the latter disagrees he is required to inform the former of his disagreement. If the disagreement is not resolved the Commissioner is then asked to submit his representation and that of the Governor of the Bank to the Federal Executive Council whose decision is final. Ultimate responsibility for monetary policy therefore rests with this body which is made up of all the members of the Federal Cabinet.

Theoretically, then, the Bank is independent of the Government in general and the Ministry of Finance in particular. In practice, the situation is not as clear-cut. Sometimes the impression is given that the Bank is just another department of the Ministry. For instance, in all his budget speeches (1959 - 65), the late Minister of Finance was in the habit of using the first person singular when setting out the monetary measures to be taken

by the Bank. The interpretation of C.V. Brown (1966, p. 144) is that the 'I' pribably refers to 'the monetary authorities'. This is unlikely to be true because the same pronoun was used everywhere in those speeches, even where speaking about new legislation to be introduced. Besides, the Minister was not a member of the Board and could therefore not stipulate the monetary policy measures to be taken. As Nwankwo (1980, p. 13) has observed, such a situation 'is potentially explosive'.

One of the potential sources of conflict between the Bank and the Ministry of Finance arises from differences in planning horizons (Okigbo, 1981, p. 251). The Ministry of Finance usually has a shorter time horizon than the Central Bank. The Ministry is often concerned with shortterm problems and its policies are influenced to a great extent by the prevailing political pressures on the Government. The Central Bank which is relatively free from such influences is able to take a longer view of the economy and formulate policies accordingly.

Another potential source of conflict is overlapping jurisdiction. The functions of the Ministry are derived from many sources such as the constitution, the Central Bank statute, the banking statute and the warrant setting out the functions of the Commissioner or Minister of Finance. Yet other functions of the Ministry are based on the interpretation of the Ministry of its statutory functions. These are usually summarized in the budget. For the 1978/79 Budget, the following are listed as some of the functions of the Ministry (Okigbo, 1981, p. 253):

> 'formulation of policies in fiscal and monetary matters; maintenance of adequate foreign exchange reserves aimed at ensuring a healthy balance of payments position; maintenance of the internal and external value and stability of the Nigerian currency'

These functions clearly bear a resemblance to those of the Central Bank.

In reality, there was no open confrontation between the Bank and the Government. But there was some evidence of discord, especially during the period before the civil war. The friction arose from the fiscal operations of the government. The First National Development Plan which was launched in 1962 expected 50% of the cost of the public sector projects to come from outside the country. In the event, this expectation proved to be too optimistic and less than half of the expected foreign aid was forthcoming. Domestic revenue also fell short of expectation. The political crises and the civil war that followed also contributed to the financial pressure. In the face of all this, the government resorted to deficit financing. After putting up with this situation for three years, the Bank publicly expressed its experience which

> 'has clearly demonstrated the difficulty of administering a policy of credit restraint in the face of expanding government budget deficits. For while the Bank was endeavouring to restrain credit in the private sector, credit to the public sector, in its potentially inflationary form, was on the increase. In fact credit operations in the government sector provided one of the major expansionary impulses on money supply in most of 1965'
>
> (CBN Report, 1966, p. 13)

It then went on to argue that in order to achieve the desired stability, credit to the private sector had to be curtailed but 'there must be a limit beyond which credit to the private sector cannot be reduced if balanced economic development is to be

realised' (pp. 13 - 4).

The resolution of this conflict was not made public. But it is clear that the Bank's warning was not heeded : the scope for deficit financing was enlarged during and after the civil war as will become clear later on. Furthermore, the Governor of the Bank complained about government interference in the affairs of the Bank in a public lecture delivered in 1979 (CBN, Report, June 1979).

In recent years, a subject of criticism in the Bank-Government relation is the provision in Sec. 8 (3) subsections (1) - (3) of the 1968 amendment decree already referred to. In summary form, the provisions are (i) the Bank should inform the Commissioner of Finance what actions it is taking or proposes to take (ii) if the Commissioner disagrees with the Board he may submit his representation and the Bank's to the Federal Executive Council (iii) whose decision is final. The controversy seems to centre around (ii) - the method of representation (Report of the Financial System Review Committee (1976)). The Commissioner is a member of the FEC while the Bank has no representation there. Secondly, the law does not specify how the Minister will put the case of the Bank before his colleagues in the Cabinet and there is no guarantee that the Commissioner will put its views (with which he disagrees in the first instance) fairly. For these reasons, the Committee recommended that Section 3 (ii) should be changed so as to read 'shall submit his representation and the representation of the Central Bank without any abridgement' to the FEC instead of 'may submit his representation and

that of the Central Bank' to the FEC. The government, however, rejected this and other recommendations relating to the relationship between the Bank and the government.

Another instance in which the Bank's advice was ignored was in respect of the payment of the salary awards discussed in Ch. 2. In the year following payment of the awards, the rate of inflation reached an all time high of 33.7% (1975) (a year earlier it was 12.5%) The Bank felt vindicated.

The conclusion is therefore that although the Bank is independent of the government in theory, in practice it is not.

1.1.2 THE COMMERCIAL BANKS

The main features of the commercial banking system are as follows. It is oligopolistic(1), highly concentrated in a few urban areas and states(2) and all banks are publicly owned, at least notionally(3). Finally, the volume of banking business has grown rapidly in recent years(4). The assets and liabilities of commercial banks are shown in Table 4.3. On the whole, Nigeria is underbanked(5).

1.1.3 OTHER FINANCIAL INSTITUTIONS

From Table 4.1 the only other financial institutions of some significance are merchant banks. Merchant banking business before 1975 was negligible(6). But they are still relatively insignificant financial institutions (Table 4.1). Insurance companies are even less significant although they are the largest

financial institutions in terms of number(7).

1.1.4 THE FINANCIAL MARKETS

Financial markets may be classified according to the length of maturity of the debt instruments used in transactions. For analytical purposes, the money market is defined here as the market for shortterm funds where the debt instruments mature within two years. The capital market is then the market for longer-term funds.

1.1.4.1. THE MONEY MARKET

Given the above definition, the money market instruments in Nigeria are Treasury Bills and certificates, commercial paper, eligible development stocks, certificates of deposits and Bankers' Unit Fund(8). The relative importance of these instruments is depicted in Table 4.4. Clearly, Treasury bills and certificates, accounting for 95.6% of the total at the end of 1981 (95.5% in 1980) are the most important money market assets.

Treasury bills are government IOUs with a maturity length of 90 days. Treasury certificates are similar to Treasury bills except that the former have longer maturity lengths. There are two varieties : one-year and two-year. Eligible Development Loan Stocks are long-term government securities of not more than three years to maturity. All government securities in Nigeria are sold at face value at the time of issue and carry a contractual rate of interest. This implies that the capital sum is guaranteed and that a purchaser can lose no more than the

TABLE 4.4 : PERCENTAGE DISTRIBUTION OF MONEY MARKET INSTRUMENTS OUTSTANDING AS AT 31.12.81

Treasury Bills	70.5
Treasury Certificates	25.1
Bankers' Unit Fund	0.2
Eligible Development Stocks	1.2
Certificates of Deposits	2.1
Commercial Papers	0.9
Total (MILLION NAIRA)	8,199.2

SOURCE : CBN, ANNUAL REPORT, 1981, p. 39

interest foregone should he decide to sell them before they mature. The amount of Treasury debts outstanding is directly related to the government's financial position(9). At 31% at the end of 1980, the ratio of money market assets to total commercial bank assets is rather low.

1.1.4.2 THE CAPITAL MARKET

The principal feature of the Nigerian capital market is its highly imperfect state. It is dominated by government stocks : the ratio to the total has fallen below 90% only once (84.8% in 1964) and has always been close to 99% (Central Bank of Nigeria, 1979). The capital market is very narrow in terms of the number of quoted firms and securities (Ojo and Adewunmi (1982, p. 234)). The level of activity on the stock exchange is very low. For instance, in 1977, the value of transactions for the whole year was only ₦180 million. Of this, ₦178.8 million was in government securities. In 1981, the correspond-

TABLE 4.3 COMMERCIAL BANK ASSETS AND LIABILITIES
AS AT 31 DECEMBER 1981, ₦ MILLION

A	ASSETS		
1	Cash and balances with banks in and outside Nigeria		2605.2
2	Total Loans and Advances		8604.8
	To: (i) Banks and subsidiaries of banks in Nigeria	1.0	
	(ii) Other customers	8242.2	
	(iii) Money at call outside CBN	297.8	
	(iv) Total Bills discounted	62.8	
3	Total Investments		2350.2
	(i) Treasury Bills	917.5	
	(ii) Treasury Certificates	856.4	
	(iii) Others	576.3	
4.	Other Assets		6277.3
	GRAND TOTAL		19477.5
B	LIABILITIES		
1	Capital Account		497.4
2	Balances held for other offices and banks		220.3
3	Money at call from banks in Nigeria		135.0
4	Total loand and Advances		
	From: (i) Central Bank of Nigeria	-	
	(ii) Others	89.8	
5	Total Deposits		10676.9
	(i) Demand	4880.9	
	(ii) Time	3816.8	
	(iii) Savings	1979.2	
6	Other liabilities (including Certificates of Depotis, 34.3		7823.7
	GRAND TOTAL		19477.5

SOURCE : CENTRAL BANK OF NIGERIA, ECONOMIC AND FINANCIAL REVIEW Vol 20, No. 1 (June 1982)

ing figures were ₦304.8 m and ₦298.7 m (CBN Report, 1981, p. 58). The Central Bank has held an increasing amount of the government stocks over the years, ostensibly because of the low yields on them(10). Finally, the prices of all private sector securities are fixed by a government authority(11).

1.2 THE ALTERNATIVE FINANCIAL MARKET

A discussion of financial markets in Nigeria would not be complete without mention of the informal sector already defined above. Unfortunately, knowledge about the nature and size of this sector is very limited. The following treatment is rather superficial.

A useful way of organizing the discussion is in terms of sources and uses of funds in the market.

1.2.1 THE SUPPLY OF FUNDS

Suppliers of funds include friends, relatives and neighbours of the borrower who normally lend money without interest but if the borrower is particularly desperate and cannot obtain interest-free credit from any other source he may have to pawn some articles. Traders also give trade credit and may be regarded as a source of funds like individuals with cash to spare. But the most important sources of funds are the professional money lenders and the informal credit associations. This group is motivated by the desire to maximize the rate of growth of its funds. The interest rates charged by them may therefore be regarded as the 'market rates' in this sector of the financial markets.

Professional money lenders, like any other dealer in the informal market, usually are in full time employment and money lending is undertaken as an incidental occupation. The rates of interest they charge are often as high as any other rates in the vicinity. Since their activities are surrounded by a great deal of secrecy borrowers are not normally aware of the rates charged by others, even within the same locality. The general shortage of funds in this market enables them to behave like monopolists.

The contribution club is the principal form of the informal credit associations. Perhaps the best known of these is the 'Esusu'. The 'esusu' is an indigenous credit association fund in south-western Nigeria. This type of credit arrangement is found all over the country and even as far afield as Trinidad and Tobago (where it is called 'susu'), Bascom, 1952, p. 63, Java, (known as 'arisan'), Japan and other parts of Asia, not to mention nearby Ghana and the Cameroons (Geertz, 1961, pp. 243 - 55). Variously called contribution clubs, friendly societies, slates, mutual lending societies, pooling clubs, thrift groups and rotating credit associations, the savings institution works essentially the same way. It is therefore not necessary to give a detailed description of the various types found in Nigeria. What needs to be appreciated is the fact that it is found in all parts of the country, rural and urban.

Three studies have been undertaken in respect of the institution and one available in published form. It must be stated at the outset that these studies were sociological and anthropological investigations. Moreover, they are fairly out of date (the latest was in 1963 while the other two were in 1952). However,

this is not a serious consideration as only the size of each contribution and the total amounts involved have changed.

All three, as well as other unrecorded cases, are variations on the same general theme. The variations are due in no small measure to economic and social factors. The three cases are : the 'esusu', the ' dashi' (a group of people found in the north) and the 'etoto' of the Ibo in south-eastern Nigeria. Since the 'esusu' has been documented in some detail[12] there is no point dwelling on it for a long time. Rather, only an outline of its working will be provided while the sociological factors will be omitted. The 'dashi' will not be mentioned at all since it is an institution of only a small fraction of the population (about 1% or less) and since it is very similar to the other cases. What is left is the Ibo version which will be considered in greater detail than the 'esusu'.

The similarity of the mechanism of the contribution club in places where it is found has struck many investigators. Writing on the subject, Geertz notes that

> 'The basic principle upon which the rotating credit association is founded is everywhere the same : a lump sum composed of fixed contributions from each member of the association is distributed, at fixed intervals and as a whole, to each member of the association in turn ... Whether the fund is in kind or in cash; whether the order the members receive the fund is fixed by lot, by agreement, or by bidding; whether the time period over which the society runs is many years or a few weeks; whether the sums involved are minute or rather large; whether the members are few or many; and whether the association is composed of urban traders or rural peasants, of men or women, the general structure of the institution is constant'
>
> (Geertz, 1961, p. 243).

The above quotation has been selected because it lists the various differences between one association and another. The 'esusu' is one such association. It has been described as being

> 'in practice a kind of temporary joint-stock bank, in which the shares are also the deposits, are collected in a fixed number of regular instalments and are returned to the shareholders in ways which offer to some of them at least a considerable measure of credit'
>
> (Galletti et al, 1956, p. 527).

A vivid illustration of its functioning has been provided by Bascom in the following words:

> 'The number of contributors, the size of the contributions and the length of the intervals at which they are made vary from one group to another. For the purpose of illustration, however, we may imagine a simple case where 20 members contribute one shilling each, monthly. At the end of 20 months, which completes the cycle in this case, each member will have contributed 20 shillings or £1, and will, on one occasion, have received the amount of £1 in return. In theory at least, each member is paid back in one lump sum exactly what he paid in contributions during the course of one cycle. There is neither gain nor loss, but the advantage to the members is that they have available a large sum of money with which to make expensive purchases or to meet debts of considerable size. Furthermore, an attempt is made to pay the fund to members at times when they have special need for it for particular purposes'
>
> (Bascom, 1952, pp. 63 - 4)

The structure of a contribution club is therefore described by the following variables : the number of memberships and the amount of contributions per membership determine the size of the fund, and the length of the interval between two contributions which, together with the number of memberships, determines the length of a cycle. The number of memberships need not be equal to the number of contributors. Two or more contributors

may join to form only one membership while a contributor may hold more than one membership. But each receives a share in proportion to his contribution. Thus, in the case of the former, a contributor receives half (or less) the contributions collected on a day.

Membership of contribution clubs may be open to the general public. But this is not very common because of the possibility of default. The common types are those formed by people related by birth, profession or a common bond. Thus clubs have been formed by extended families, teachers, traders, civil servants and members of an age-grade association. It is clear from these examples that the informal market covers both the rural and urgan areas.

1.2.1.1 RELATIVE IMPORTANCE OF THE SOURCES

The various sources of funds in the informal market have been briefly considered above. The next task is a comparison of the importance of the main sources. In the absence of more recent data, the following analysis is based on the results of a survey of 370 and 357 cocoa-farming families conducted in 1951 and 1952 respectively (R. Galletti et al, 1956). Admittedly the study is now out-dated but it is better than nothing. Besides, it will be supplemented with the results of a pilot survey conducted in the same area in 1973 (Ojo, 1976).

Available evidence suggests that the professional money lender is not as important a source of finance in Nigeria as in, say, India (as described by, e.g. Wai, 1957). This may be due to

TABLE 4.5 PROPORTIONS OF OUTSTANDING DEBT OF SURVEY FAMILIES IN 19 LOCALITIES BORROWED FROM DIFFERENT SOURCES (% OF TOTALS)

JUNE	CO-OP	WHOLESALE TRADERS	PRODUCE BUYERS	PETTY TRADERS	NEIGH-BOURS	MONEY LENDERS	LABOURERS	OTHER	NOT KNOWN	TOTAL
1951	5.3	3.1	21.3	3.2	53.3	10.0	2.5	1.2	0.1	100
1952	3.8	2.0	19.4	6.6	44.7	12.3	10.3	0.7	0.2	100

SOURCE: R.G. GALLETTI, K.D.S. BALDWIN and I.O. DINA, NIGERIAN COCOA FARMERS (OXFORD : OUP, 1956)

TABLE 278, p. 525

1.2.2 THE DEMAND FOR FUNDS

All the surveys available do not consider the uses of funds in this market. In the absence of explicit data on the demand for funds, the reasons for saving may be used as a proxy. The data are in Table 4.7.

TABLE 4.7 : MAJOR REASONS FOR SAVING IN NON-URBAN AREAS

	NO. OF RESPONDENTS	RELATIVE IMPORTANCE, %
Business Purposes	44	22.3
Educational "	54	27.4
Ceremonial "	10	5.1
Housing "	31	15.7
Personal Consumption	18	9.1
Future security	39	19.8
Repayment of Past Loans	1	0.5
TOTAL	197	100.0

SOURCE : A.T. OJO, THE NIGERIAN FINANCIAL SYSTEM p. 61, Table 5.3

A striking feature of the information contained in this table is that in spite of being conducted in a rural, peasant society, none of the respondents mentioned the improvement of agriculture as a reason for saving (in Nigerian parlance the term 'business' is never applied to agriculture). Another important feature is the relative importance of education which accounts for over a quarter of the reasons for saving. This is not surprising because 'development associations' whose sole purpose

is the communal finance of education of indigenous students are found in all parts of the country. Housing also ranks high on the scale because there are no viable sources of finance. There are no building societies in the country apart from the Federal Mortgage Bank and a number of state housing authorities which cater for selected senior civil servants.

1.2.3 STRUCTURE OF INTEREST RATES

It is by now common knowledge that interest rates in the unorganized money markets of underdeveloped countries are notoriously high (Wai, 1957, 1977; Bottomley, 1963, 1964, 1968). What may be new is the magnitude of the rates. In a study undertaken in Eastern Nigeria many years ago, Ardener (1953, p. 135) found that 'The interest rate on loans in this area is normally 100% p.a.' and repeats this assertion many times. But even this appears to be an understatement as the following quotation from the same page shows:

> 'The smaller the period and amount of the loan the higher tends to be the rate of interest. 10/- can be borrowed for 1d per day. £1 can be borrowed for 2d per day. It is becoming more frequent for the interest on loans to be paid monthly. Thus £1 can be borrowed at a monthly interest of 4/-'.

Taking the lower interest of 4/- per £ per month, yields a rate of 233% p.a. on a simple interest basis. That was why a fund of just over £3 14/- could grow to £17 19. 4½d in just over a year (Ardener, 1953, p. 135).

The situation is not very much different in other parts of the country. In the extensive survey by Galletti et al (1956) mentioned earlier, it was found that 'Effective rates (of interest)

TABLE 4.8 PROPORTION OF LOANS OUTSTANDING IN JUNE 1951

BORROWED AT VARIOUS RATES INTEREST BY 370 FAMILIES (ALL AREAS)

RATE % p.a.	NIL	5 or Less	OVER 5 - Less than 10	10 - 15	15 - 20	20 - 25	25 - 50	50 - 100	OVER 100	NOT KNOWN	TOTAL
% of Loan	63.1	1.5	1.6	4.0	0.9	3.2	5.9	9.5	2.6	7.7	100

SOURCE : R.G. GALLETTI et al NIGERIAN COCOA FARMERS Table 272 p. 512

between 60% and 166% are not uncommon in all the major (cocoa) producing areas' (p.510).

However, when Tables 4.5 and 4.6 (sources) are studied carefully, it will become apparent that the average rates are not as high as indicated above. This is because the suppliers charging high rates of interest are of relatively little significance while the bulk of the loans carry low interest rates. This point is brought out more carefully in the next table. Most of the loans (63.1%) were on an interest-free basis while only an eighth of them attracted interest rates of 50% p.a. or more. The average lending rates are therefore closer to the range of 24 - 36% estimated by Wai (1977, p. 304). Yet these are quite high by any standards. The conclusion is therefore that interest rates in the informal money market are higher than outside it.

1.3 CONCLUDING REMARKS ON THE FINANCIAL SYSTEM

The Nigerian financial system is dominated by the Central and commercial banks which own over 90% of the assets/liabilities of the financial institutions between them with the commercial banks taking up over 50% of the total. Although the Central Bank is statutorily equipped with all the instruments of monetary control it needs, its independence in the use of these weapons is compromised by the Federal Ministry of Finance. If the Central Bank is excluded, commercial banks are the only financial institutions of major importance.

2. THE OBJECTIVES OF MONETARY POLICY

The objectives of monetary policy are derived from those of economic policy discussed in Ch. 1. From that chapter, the following objectives may be inferred : (a) maintenance of confidence in the Nigerian currency; (b) price stability; and (c) the acceleration of the rate of economic growth through the organization and provision of development finance. The relative position of these objectives on the authorities' scale of preferences varied from period to period and is assessed in Section 6.

Given these objectives, the task undertaken in this section is an evaluation of the use of the weapons of monetary policy to achieve them, with emphasis on inflation and the balance of payments.

3. TECHNIQUES OF MONETARY MANAGEMENT IN NIGERIA

The conventional weapons of monetary policy are normally thought to be open market operations, the reserve requirements, the minimum lending rate, and moral suasion and related controls. They are discussed in that order.

3.1 OPEN MARKET OPERATIONS

It is often asserted that 'open market operations constitute the primary weapon of monetary policy' (Aschheim, 1961, p. 31; also: Smith, 1963, p. 47; Guttentag, 1966 p. 16; and Simpson, 1976, p. 225). Open market operations (OMO) work by altering

the level of commercial bank reserves and hence the prices of the securities affected or other interest rates without affecting bank reserves. The effective use of OMO in this manner requires certain preconditions which are well explained in textbooks (e.g. Simpson, 1976). These are : the Central Bank should have an appropriate portfolio of assets in reasonable quantities; the securities used should be sufficiently attractive to be held as wealth; the demand for OMO assets should be relatively interest inelastic; and fairly stable commercial bank liquidity ratios enhance the efficacy of OMO. For various reasons OMO have never been used in Nigeria. As seen in Section 1 above, financial intermediation is still at a very low level and the money market is correspondingly imperfect. The main money market instruments - Treasury bills and certificates - were not available in appreciable quantities before 1979 and the certificates were relatively unattractive. The CBN has therefore had to take up a large fraction of it. Unlike in the UK, there is no agreement between the CBN and the discount houses to take all unsubscribed bills (Artis and Lewis 1981). The CBN's holding money market assets is thus a measure of their excess supply. As in the case of all commodities, the inability of the CBN to sell the securities is largely explained by the prices of the assets (discussed below).

Secondly, since the quantity of the relevant assets was small, transactions in them might be insufficient to bring about the desired change in bank reserves(14).

The shallowness of the money market is related to the small size of the public sector. This has constrained the main tool of OMO

(Treasury bills) whose volume (along with that of Treasury certificates) depends on government borrowing requirements.

Thirdly, the definition of reserve assets has militated against the effectiveness of OMO in Nigeria. To be effective in altering the level of bank liquidity, it is desirable to extend OMO to assets not admissible as reserve-eligible. But in Nigeria, reserve assets include Treasury bills and certificates as well as development stocks with three years or less to maturity. Open market operations on any of them would only alter the composition of liquid assets while leaving the level of bank reserves unaffected.

Finally, as shown in Ch. 3 and Chart 3.2, commercial bank liquidity ratio has fluctuated very widely between 27.3% and 95.4% while the statutory minimum limit remained unchanged at 25%. In these circumstances, it would be difficult to influence the level of bank liquidity through OMO without producing some undesirable consequences (e.g. drastic changes in interest rates and bank failure).

For these reasons, the authorities have never used OMO as a deliberate weapon of monetary policy. Ultimately, the inapplicability of the weapon reduces to the unwillingness of the authorities to allow interest rates to rise above certain levels, and the volatility of bank liquidity. Other factors are secondary.

3.2 LIQUIDITY REQUIREMENTS

This weapon is particularly attractive to countries which do not have developed money markets as it does not require any market as such to be effective. However, in order to maximize its effectiveness, certain conditions need to be met. The Central Bank should be able to control the volume of reserve assets in the banking system and the ratio should be above that which commercial banks would have maintained in the absence of statutory regulations. Furthermore, commercial bank liquidity ratios should be reasonably stable. If the ratios vary widely the effect of changes in the legal ratio may be to alter the level of excess reserves without affecting the capacity of banks to expand credit. Also, if the ratio is used frequently, banks may come to anticipate the changes and take precautions, thus neutralizing the Central Bank action. The weapon should therefore be used sparingly. In any case, it cannot be relied upon for contractionary monetary policy.

In Nigeria, there are two liquidity ratios : total liquidity ratio and cash reserve ratio.

3.2.1 TOTAL LIQUIDITY RATIO

This has remained at 25% since it was first set by the CBN. However, it has been changed implicitly through the redefinition of reserve assets. But in each case, the aim was not to influence credit expansion by banks(15).

Although the Bank was empowered to set separate ratios for diff-

erent classes of banks and for demand and time deposits, it has always prescribed one ratio for all banks and deposits. The main reason for the non-use of the weapon appears to be the high and widely fluctuating levels of commercial bank excess reserves. But the authorities made matters worse by admitting a wide variety of assets in the definition of eligible reserve assets.

3.2.2 VARIABLE CASH RESERVE RATIO

The Central Bank acquired this power under the 1968 amendment to its act. Unlike the uniform application of the total liquidity assets ratio, it has used this tool selectively. But the weapon was not used until 1976. In clarifying the operation, the Bank states that the cash deposit of each bank should be 'expressed as a ratio of its total demand deposits plus time deposits on which it pays interest of less than 2½% per annum' (CBN, Report, 1976). For this purpose, banks were classified into four as in Table 4.9.

TABLE 4.9 : STIPULATED CASH RESERVE RATIO OF BANKS BY CLASS

CLASS OF BANK	DEFINITION IN TERMS OF DEPOSIT LIABILITIES	STIPULATED CASH RESERVE RATIO (%)
A	₦300 m or more	12.5
B	₦100 m or more but less than ₦300 m	10.0
C	₦30 m or more but less than ₦100 m	7.0
D	Less than ₦30 m	5.0

SOURCE : CENTRAL BANK OF NIGERIA, REPORT, 1976, p. 6

These ratios remained unchanged until 1979 when they were revised as shown in Table 4.10.

TABLE 4.10 : MINIMUM AND ACTUAL AVERAGE CASH RATIOS, %

	STIPULATED MINIMA				ACTUAL (MONTHLY AVERAGE)
	A	B	C	D	
1975	12.5	10	7	5	26.3
1976	12.5	10	7	5	31.8
1977	12.5	10	7	5	16.1
1978	12.5	10	7	5	8.0
1979	6.25	5	3.5	2.5	12.4
1980	5	4	3	2	10.6
1981	5	4	3	2	

SOURCE : CBN, ANNUAL REPORTS, 1976 - 81

The cash ratio also is subject to considerable fluctuations. The Bank appears to have been following the movement of the ratio rather than influencing it. The dramatic fall of the monthly average in 1978 seems to have occasioned the halving of the legal minimum a year later. Evidently the Bank did not intend to use the weapon for restricting credit expansion. This view is reinforced by the fact that it was more or less compelled to use the tool following the recommendations of the Anti-Inflation Task Force (Oct. 1975) to that effect. The conclusion is that the cash ratio was not actively used by the Central Bank possibly because of its skepticism regarding the efficacy of the tool.

3.3 THE MINIMUM LENDING RATE

Between April 1960 and December 1961 the minimum lending rate (MLR) was revised ten times (Akinnifesi and Phillips, 1978, p. 27). The rate was changed again three times between 1962 and 1968 as follows : in January 1963 it was reduced from 4½% to 4% but increased to 5% in December 1964 before being reduced again to 4½% in May 1968. It remained at this level until 1975 when it was reduced by 1% to 3½%.

Under the 1968 Decree amending the Central Bank Act, all interest rates are linked to the MLR. Furthermore, the Bank is expected to prescribe the interest rate structure for the financial system. According to the Bank, it

> 'formally directed the commercial banks to link their interest rates with the minimum rediscount rate and approved the following interest rate structure for the banks. The minimum and maximum rates of interest chargeable by the banks were set at 2½ and 7½%, respectively, above the minimum rediscount rate'
>
> (CBN, Report, 1970, p. 63)

This marked the first official intervention in interest rates in Nigeria which have remained regulated since then. Thus, when the rediscount rate was reduced in 1975, all other rates were also reduced e.g. the commercial bank minimum and maximum lending rates from 7 and 12% to 6 and 9% respectively, the Treasury bill rate from 4 to 2½% (from then always 1% below the MLR). The downward revision of interest rates was announced in the 1975 - 76 Budget and took effect from 1 April 1975, the beginning of the fiscal year. The minimum lending rate, along with other predominant interest rates, was raised in the Budgets of 1977 - 78, 78 - 79, 79 - 80, 80 - 81 and 81 - 82. Details are avail-

able in Chart 4.1.

From this review, it is clear that the minimum lending rate weapon has been used. However, it is also true that the changes in the 1960's cannot be interpreted as active monetary policy. The Bank did not hide the fact that the changes in its rediscount rate were a passive response to external circumstances since 'these revisions were aimed at encouraging the commercial banks to repatriate short term funds from London and hold them in Nigeria' (Akinnifesi and Phillips, 1978, p. 27). Indeed,

> 'in view of the very dependent nature of the Nigerian colonial economy up to the 1960 's, the interest rate structure in Nigeria was adjusted to the rediscount rate of the Bank of England and reflected not the credit and monetary circumstances within Nigeria but those in the London market'
>
> (Okigbo, 1981, p. 69)

Active monetary policy in the Bank Rate therefore started in 1975.

The logic behind the use of this weapon in Nigeria is sometimes difficult to comprehend. For example, in reporting the change to interest rates in 1975, the Central Bank attributed the downward revision to 'the overall high liquidity of the economy' (CBN, Report, 1975, p. 20). In that year the annual rate of inflation averaged over 33%. Even when the minimum lending rate was raised in subsequent years, the rise was only 1% or less. Changes were thus infrequent and small in magnitude. The suggestion here is that the use of the rediscount rate weapon in Nigeria has been less than satisfactory. Interest rates play an important role in an economy and therefore deserves a closer examination than has hitherto been accorded to it.

General interest rate policy is thus reviewed in the following section.

3.4 INTEREST RATE POLICY

Interest rate policy has a number of roles to play in an economy. First, interest rates may be used to influence the cost and availability of credit. This is the purely monetary role and is the basis of such monetary policy tools as the Central Bank discount rate and open market operations discussed above. Secondly, interest rates may be used as an instrument for a more effective mobilization of savings. This point is especially relevant for developing countries where it has long been argued that the insufficiency of domestic savings is an effective constraint on economic growth(16). If this is so, then there is the need to encourage and mobilize savings by offering attractive rewards in the form of sufficiently high real rates of interest on savings and time deposits, government securities and liabilities of financial institutions. However, there is still considerable doubt as to whether savings are interest-sensitive. According to Shackle (1965, p. 151) 'the influence of the rate of interest on saving is doubtful even as to its algebraic sign'. Instead, such diverse factors as income change and the sources of income (e.g. from employment) have been stressed as important in the savings function (Houthakker, 1965, p. 222). Yet, other writers have suggested that savings may be subject to life cycles : 'saving may be for a specific purpose (the Harrodian "hump saving"), for old age, for inheritance, or for unknown future contigencies' (Chandavarkar, 1971, p. 51). In these circumstances, it is

difficult to see how changes in the rates of interest offered on financial assets will affect the saving decision. Nevertheless, it must be borne in mind that the evidence is not conclusive. Some studies have indicated that consumption may be sensitive to interest rates and that the relationship is probably negative (Hamburger, 1967, p. 1131; de Leeuw and Gramlich, 1969, pp. 480 - 81). Moreover, in Nigeria there are other grounds for pursuing a purposeful interest rate policy (see below).

Another possible use of interest rates is in the determination of the optimum allocation of income between present and future consumption. The social rate of discount whose function is to rank present consumption relative to future consumption is influenced to a great extent by the prevailing rates of interest. Finally, interest rates may be used as a device for rationing funds among competing investment projects. For this purpose, the higher the rate of interest used, the lower will be the present value of a future income stream and the fewer will be the projects which are judged commercially viable.

This discussion shows that interest rates have got an important role to play in an economy. It is therefore necessary for a country to have an appropriate interest rate policy. The aim of this section is to offer a tentative appraisal of monetary policy use of interest rates in Nigeria with special reference to the period 1970 - 81.

3.4.1 INTEREST RATE POLICY, 1970 - 81

During this period, the authorities adopted the policy of admini-

stering interest rates by stipulating minimum and maximum rates which financial institutions could pay on their liabilities and charge on their loans. Before discussing the objectives of the policy, it may be useful to ask why intervention was necessary at all.

One reason often given for government intervention in the financial markets of underdeveloped countries is the presence of substantial externalities and other imperfections in those markets (Leite, 1982). Market imperfections arise from the very nature of the financial market. Briefly, the financial system consists of, aside from the Central Bank, a few commercial banks and a handful of specialized financial institutions, mainly development banks (which are invariably owned by the government) and insurance companies. Under almost any criteria, commercial banks dominate all financial institutions (excluding, of course, the Central Bank). In Nigeria, three banks control the bulk of commercial banking business[17], while a similar concentration of business exists among the other types of financial institutions. As a result, the financial system is oligopolistic. Moreover, there is no strong competition between the different financial institutions. For instance, there is only one building society which is owned and strictly controlled by the Federal Government. Thus a potential source of competition to the commercial banks as exists in some countries (such as the UK) is absent. Also, financial assets are not widely held. In general, commercial banks tend to monopolize short-term assets while longer-term debt instruments are almost the exclusive preserve of savings-type institutions. Then there is the fragmentation of the

money and (the undeveloped) capital markets into submarkets that are not as closely integrated as found in Western economies. In particular, there is the broad division of the financial system into the formal and informal sectors. Given these circumstances, it is argued, there is no guarantee that a system of market-determined interest rates would be socially optimal. This argument is akin to that used to justify government intervention in the economy as presented, say, by Musgrave (1959) and Oates (1972).

Certain considerations appear to have influenced Nigeria's interest rate policy. The first was the desire to increase the level of investment generally. Secondly, it was the aim of general economic policy to encourage the flow of investment to some sectors while discouraging the flow to other sectors. One of the methods used to implement this objective was the manipulation of interest rates. Finally, for whatever reason, the government sought to minimize the cost of funds to it. These objectives of interest rates are examined in more detail below.

As stated at various points in this study, one of the main objectives of the country's economic policy was to accelerate the rate of growth of output. It was believed that low rates of interest would stimulate investment and hence growth. This belief seems to be based on the notion that while savings are probably unresponsive to interest rate changes, investment expenditures are negatively related to interest rates. In that case, in principle, it would be possible to stimulate investment without necessarily adversely affecting saving by

maintaining very low rates of interest.

As in the case of the saving-interest relation, the role of interest rates in the investment function has not been firmly established. For example, McKinnon (1973) and Shaw (1973) have challenged the idea that low rates of interest stimulate investment. This counter argument - that interest rate changes may not be very important in the investment decision - appears to be valid in Nigeria, especially in 'the period 1970 - 74 when the returns being declared by the industrial and commercial houses ... were over 100% return on capital invested (and)first class prime advance rates remained unchanged at 7%' (Okigbo, 1981, p. 70.) Given this high rate of return, what would be more important to firms is whether or not credit will be available at all and not its cost.

Another objection to the argument is that interest rates may in fact affect savings in some respects. If nominal interest rates are sufficiently low so that real rates are below their equilibrium values (as they appeared to be in Nigeria during the review period), the resulting savings available for investment may be insufficient. This can happen because even if the level of savings is invariant with respect to real interest rates, the form in which these savings are held may be affected by the various rates. As an example, if the interest rate in commercial bank savings deposits is low relative to the rates on, say, building society deposits, savers may opt for the latter. Where the rates on all institutional deposits are considered too low as not to justify parting with perfect liquidity, individuals

with excess balances may decide to store the cash in their homes or buy physical assets such as consumer durable goods. When savings are held in such forms, they are not available for investment. In this sense, very low rates of interest may actually inhibit the growth of investment.

In the plan documents and in the budgets, the authorities expressed the desire of keeping down the cost of development finance by maintaining a low level of interest rates. This policy is found in other places. It has been observed that

> 'in many (Latin American) countries that imposed interest rate ceilings to prevent the increase in interest rates, this policy was concomitant with or even propelled by a keen desire of the fiscal authorities to have access to subsidized credit for use by the governments, the public enterprises, and other public entities'
>
> (Galbis, 1979, p. 335)

The idea behind this argument seems to be the belief that the liberalization of interest rates would result in inflation (Leite, 1982, p. 56). However, the inflationary impact of allowing interest rates to rise appears to have been exaggerated. Interest rate payments probably account for a small percentage of total production costs. Moreover, as Leite (1982, p. 56) has argued, it is unlikely that the increase in production costs arising from increases in interest rates will be passed completely to consumers. On the contrary, a general increase in interest rates may lead to a reduction in the rate of inflation if one or both consumption and investment are negatively related to interest rates.

Another use to which interest rates were put over the 1970's

was in redirecting credit flows towards specific sectors at the expense of others. Thus one finds in official publications statements such as the following:

> 'interest rates chargeable by commercial and merchant banks were revised in April in order to stimulate investment in the more productive sectors of the economy and to discourage the flow of credit to non-productive imports'
>
> (CBN, Report, 1976, p. 6)

Since this particular policy will be dealt with in great detail below, it is not pursued further.

It has been suggested that one of the reasons for low interest rates found in less developed countries is 'the desire of the monetary authorities to have an interest rate structure similar to that prevailing in the advanced countries' (Park (1973, p. 386)). A superficial examination of the evidence would seem to suggest that the argument is applicable to Nigeria, especially in the 1960's when the interest rate structure was very similar to that of the U.K. In particular, the Treasury Bill rate and the Central Bank's rediscount rate were often changed in response to changes in the U.K. corresponding rates. But this close association was broken in the 1970's, starting with the Central Bank of Nigeria (Amendment) Decree, 1968, and the Banking Decree, 1969. The latter decree, for example, required that all banks be incorporated in Nigeria and laid conditions for the transfer of funds out of and in to Nigeria, thus removing the need for domestic interest rates to reflect interest rate movements abroad. Thus where the interest rate structure in the country was similar to that in other countries, it was not so much the desire of the authorities as the necessity which arose from the close

links between the local banks and their parent companies abroad.

3.4.2 INTEREST RATE STRUCTURE

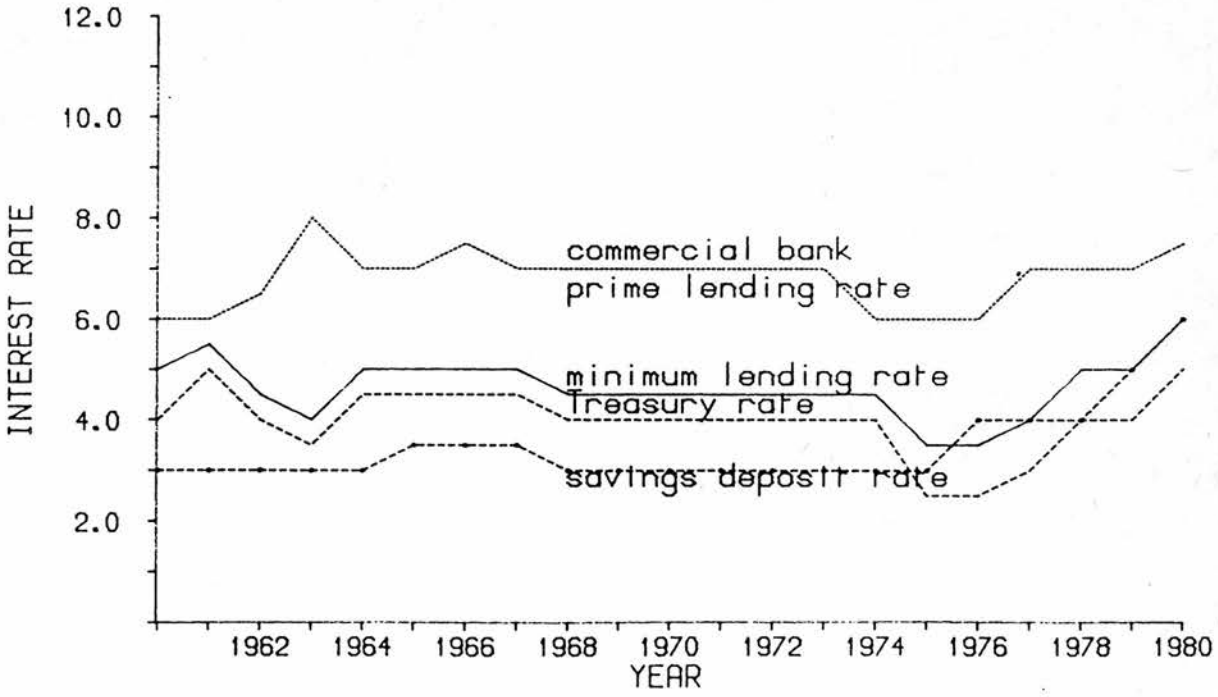
The structure of interest rates that resulted from the various considerations above is summarised on Chart 4.1. These rates refer to the organized sector of the money market only.

It would be noted that quoted interest rates in Nigeria have a number of defects. In the first place, some rates are quoted in terms of minima and maxima while only the range is prescribed for others. Thus deposit rates usually represent minimum values; lending rates for the preferred sectors relate to the maximum permissible; and the lending rates for the less preferred sectors are subject to both an upper and a lower limit. It is therefore difficult to ascertain the rates at which business has actually been done for various types of transactions.

Secondly, there is need for another adjustment. This arises from the presence of various forms of bank charges the magnitude of which varies from bank to bank and may even depend on the valuation of customers by banks (which may be based on, for example, the size of customer's transaction or the type of collateral tendered). In an environment of generally low interest rates, banks may manipulate these charges to the extent that the effective interest rates exceed the legal maximum by a wide margin. In such cases, quoted interest rates are not very useful for judging the appropriateness of interest rate policy.

In comparison, deposit rates are much more reliable. Since the

Chart 4.1 : Interest Rates 1960-80



SOURCE : CENTRAL BANK OF NIGERIA, ECONOMIC AND FINANCIAL REVIEW DEC 1966 - DEC 1981

TABLE A-4.1 NOMINAL INTEREST RATES, 1960-80

	Minimum Lending Rate	Treasury Bill Rate	Savings Deposit Rate	Prime Lending Rate	Time Deposit Rate (Min.)	Time Deposit Rate (Max.)	Federal Savings Rate
1960	5.0	4.0	3.0	6.0	3.0	3.5	2.5
1961	5.5	5.0	3.0	6.0	3.0	3.5	2.5
1962	4.5	4.0	3.0	6.5	3.0	3.5	2.5
1963	4.0	3.5	3.0	8.0	3.0	3.5	2.5
1964	5.0	4.5	3.0	7.0	3.0	3.5	2.5
1965	5.0	4.5	3.5	7.0	3.5	4.0	2.5
1966	5.0	4.5	3.5	7.5	3.5	4.0	2.5
1967	5.0	4.5	3.5	7.0	3.5	4.0	2.5
1968	4.5	4.0	3.0	7.0	3.0	3.5	2.5
1969	4.5	4.0	3.0	7.0	3.0	3.0	2.5
1970	4.5	4.0	3.0	7.0	3.0	3.7	2.5
1971	4.5	4.0	3.0	7.0	3.0	4.0	2.5
1972	4.5	4.0	3.0	7.0	3.0	4.0	2.5
1973	4.5	4.0	3.0	7.0	3.0	4.0	4.0
1974	4.5	4.0	3.0	6.0	3.0	4.0	4.0
1975	3.5	2.5	3.0	6.0	3.0	4.0	5.0
1976	3.5	2.5	4.0	6.0	2.5	3.5	5.0
1977	4.0	3.0	4.0	7.0	3.0	2.0	5.0
1978	5.0	4.0	4.0	7.0	4.7	5.5	5.0
1979	5.0	4.0	5.0	7.0	5.5	6.5	5.0
1980	6.0	5.0	6.0	7.5	5.7	6.5	6.0

TABLE A-4.2 REAL INTEREST RATES, 1960-80

	Minimum Lending Rate	Treasury Bill Rate	Savings Deposit Rate	Prime Lending Rate	Time Deposit Rate (Min.)	Time Deposit Rate (Max.)	Federal Savings Rate
1960	-1.1	-2.1	-3.1	-0.1	-3.1	-2.6	-3.6
1961	-0.8	-1.3	-3.3	-0.3	-3.3	-2.8	-3.8
1962	-0.8	-1.3	-2.3	1.2	-2.3	-1.8	-2.8
1963	6.8	6.3	5.8	10.8	5.8	6.3	5.3
1964	3.9	3.4	1.9	5.9	1.9	2.4	1.4
1965	1.1	0.6	-0.4	3.1	-0.4	0.1	-1.4
1966	-4.7	-5.2	-6.2	-2.2	-6.2	-5.7	-7.2
1967	8.7	8.2	7.2	10.7	7.2	7.7	6.2
1968	4.9	4.4	3.4	7.4	3.4	3.9	2.9
1969	-5.5	-6.0	-7.0	-3.0	-7.0	-7.0	-7.5
1970	-9.3	-9.8	-10.8	-6.8	-10.8	-10.1	-11.3
1971	-11.5	-12.0	-13.0	-9.0	-13.0	-12.0	-13.5
1972	1.7	1.2	0.2	4.2	0.2	1.2	-0.3
1973	-0.9	-1.4	-2.4	1.6	-2.4	-1.4	-1.4
1974	-8.9	-9.4	-10.4	-7.4	-10.4	-9.4	-9.4
1975	-30.0	-31.0	-30.5	-27.5	-30.5	-29.5	-28.5
1976	-18.7	-19.7	-18.2	-16.2	-19.7	-18.7	-17.2
1977	-17.5	-18.5	-17.5	-14.5	-18.5	-19.5	-16.5
1978	-11.6	-12.6	-12.6	-9.6	-11.8	-11.1	-11.6
1979	-6.8	-7.8	-6.8	-4.8	-6.3	-5.3	-6.8
1980	-3.9	-4.9	-3.9	-2.4	-4.2	-3.4	-3.9

quoted rates are the minimum, it is safe to assume that these are the rates actually offered by financial institutions in view of the relatively low lending rates. For example, the lending rates for the favoured sector were fixed within the range of 4 to 6% p.a. in 1979. At the same time, the minimum savings deposit rate was pegged at 5%. Profit-maximizing banks would not be expected to offer a deposit rate in excess of the stipulated minimum of 5%.

In spite of these weaknesses, published nominal interest rates will continue to be used here as other alternatives do not exist.

3.4.3. CRITERIA FOR ASSESSING INTEREST RATE POLICIES IN NIGERIA

Various criteria for determining the appropriateness of interest rates in underdeveloped countries have been put forward(18). Four of these are reviewed briefly here.

3.4.3.1 REAL VERSUS NOMINAL RATES

One popular method of appraising interest rates is to compare the level of interest rates with the annual rate of inflation. The expectation is that the real rate of interest, defined as the nominal interest rate less the annual rate of inflation, should be positive for otherwise savers will incur a capital loss.

> 'The real rate of interest is the reward for sacrifice involved in holding rather than consuming wealth. If individuals optimize a stream of real consumption over time, and assuming the existence of only two periods, "future" and "present", the real rate can be defined as the relative price between future and present consumption'
>
> (Leite, 1982, p. 61)

A reconstruction of the interest rates along these lines results in the interest rates shown as Table 4.15. The Table shows that apart from 1980 when the real maximum lending rate was a mere 0.3%, all rates were negative in real terms throughout the period 1970 - 80. The phenomenon of negative real rates of interest is sometimes taken to be indicative of financial repression (Galbis, 1979, pp. 353 - 60). On this basis, the Table shows that there was financial repression through the 1970's. Although it is conceivable for the equilibrium real interest rates to be negative, it is doubtful whether such an equilibrium can persist for a period of over ten years as happened in Nigeria. Therefore, the conclusion to be drawn from the application of this criterion is that the authorities maintained interest rates at sub-equilibrium values. This conclusion is not invalidated by the observations of Chandavarkar (1971, p. 67) that 'the real rates on saving deposits was negative in the developed countries (specifically in U.K. and Japan) in all the years' 1965 - 69 because, as shown above, not only the deposit rates but all rates, including the lending rates, were negative for a prolonged period.

3.4.3.2 INTEREST RATES IN DEVELOPED COUNTRIES

Another standard for assessing interest rates in developing countries which has been suggested is to compare them with the levels prevailing in developed countries. It is then argued that interest rates should be higher in developing than in developed countries (Myrdal, 1967; Bruton, 1973). The assumption behind this argument is that since the developed countries are more abundantly endowed with capital than their less developed

counterparts, the prices of capital should be higher in the latter than in the former. This capital scarcity argument has been questioned by Khatkhate (1980). According to him, the argument implies that (i) real interest rates which reflect the scarcity of capital have historically fallen with the growth of the capital stock (ii) savings which are the sources of growth in the capital stock are interest-elastic (iii) capital scarcity reflects the rate of return on capital or the rate of interest and (iv) in developing countries labour is substituted for capital when interest rates are higher than otherwise. He concludes by arguing that the experience of the now developed countries and theoretical and empirical work have shown the first two propositions to be false while the evidence available does not support the other two. A comparison of interest rates in the two sets of countries is therefore inappropriate.

The position taken here is the same. Interest rates should be judged according to conditions prevailing in an economy. Moreover, capital movements in countries like Nigeria often take the form of direct investment and official capital flows such as foreign aid and loan repayments. These are unlikely to be sensitive to domestic interest rates. Finally, the very idea of capital shortage in Nigeria is the subject of a dispute, even before oil emerged as a dominant force in the economy[19].

3.4.3.3 RATES OF RETURN ON INVESTMENT

Rates of return on investment have also been suggested as a possible yardstick for measuring the appropriateness of interest rates. This line of argument has been followed by Khatkhate

(1980). After observing that

> 'If money is considered an asset comparable to other assets, there is no reason to stop at only the financial assets of one sort or another - cash at one end and long-term bonds at the other. Investment and consumption goods, among others, are also assets available to be held by the public with given income and wealth. The interest rate can then be viewed in its role as the rate of return or yield consequent on holding different types of assets ... Assets will tend to be held in combinations such that the marginal rates of return ... on all assets are equal'
>
> (pp. 215, 216).

He then asks which of the various rates of return should be taken as a "lead" rate for others to follow. This he answers as follows:

> 'Clearly, the crucial rate from this point of view is the rate of return on investment (i.e. capital), as all other financial assets are claims or ultimately motivated by the desire to finance such capital'
>
> (p. 217)

This proposition has its own problems. As factors of production are not perfectly mobile in most countries and in many instances there are barriers to entry in the high-return investment sector, there are many rates of return on investment in any economy. Furthermore, the calculated rates of return are influenced by many factors. Apart from the accounting method used, the calculated rate of return on any project may deviate from the true rate because the calculations are based on actual rates which, in the face of financial repression, are suboptimal (Leite, 1982, p. 69) i.e. since interest rates are kept artificially low, they are no longer suitable for investment decisions. The usefulness of the suggestion is further reduced if a country is experiencing rapid rates of inflation because of the inevitably high nominal profitability of investment. As mentioned earlier,

the rate of return on capital in Nigeria for enterprises in the first half of the 1970's was over 100%. It would be ridiculous to suggest interest rates approaching that magnitude became such high rates of return were earned only by firms which enjoyed monopoly profits.

Nevertheless, the rate of return on investment may be used as a supplementary yardstick if some of the problems mentioned above are taken into consideration.

3.4.3.4 RATES OUTSIDE THE ORGANIZED MONEY MARKET

A distinguishing characteristic of the financial system of underdeveloped countries is the coexistence of a traditional with a modern sector, each of which is more or less self-contained. In general the interest rates in the informal sector are relatively very high. Also, this sector is the main source of credit to the bulk of the (mainly rural agricultural) population. The share of this sector in agricultural credit has been estimated at 72% for Nigeria (Wai, 1977, p. 294), although it is probably higher. U Tun Wai estimates the level of interest rates in this sector for 1961 as follows

Lower exceptional	Less than 10%
Usual	10 - 50%
Occasional	70%
Higher exceptional	100 - 500%

(Table 4, p. 304)

He puts the average lending rates at between 24 and 36%. But evidence from elsewhere tends to indicate that the rates have been underestimated. Nevertheless, if one accepts Wai's average

rates, they are still high relative to those prevailing in the modern sector.

Having made this point, it may now be asserted that a comparison of the two interest rate structures is not appropriate. This is because the rates in the informal sector are not free market rates. In a number of papers, Anthony Bottomley (1963, 1964, 1975) has stressed four factors that contribute to the high rates of interest charged on loans in the informal sector : (i) the opportunity cost of parting with liquidity (ii) risk premium (iii) premium for administration and (iv) monopoly profit. The risk attached to the loans arises from the fact that such loans are normally unsecured. As income is generally low and as loans may be used for unproductive purposes, the risk of default is very real. Often when the loan is due for repayment the lender has to visit the debtor several times. Even when it is repaid, it is done at uneconomically small instalments which has the effect of raising administrative costs. Finally, as stated earlier, rural income is by and large lower than elsewhere. There is therefore little surplus available for lending. Lenders therefore enjoy some monopoly in areas where there is a desire to spend more than current income. In addition to these factors, Long (1968, 1973) has added the seasonal character of the demand for these loans.

For these various reasons, conparison with the informal sector is not considered desirable. But such rates may serve as upper limits on the rates in the modern sector. Furthermore, a desirable objective of monetary policy in general would be to

diminish the importance of the unorganized money market, thereby integrating the national money market.

3.4.4 CONSEQUENCES OF NIGERIA'S INTEREST RATE POLICY

It is clear from Chart 4.1 that the rates have remained relatively low and stable over the years.

Aside from the reduction of the maximum lending rate by 3 percentage points in 1975, there were no changes of more than 1 percentage point in interest rates at any one time. The changes that were made were very infrequent from 1962 and became even more so from 1968. The few changes that were made since 1968 had as their objectives the redirecting of credit and the reduction of commercial bank liquidity. Judged on the basis of these objectives there appears to be little evidence that interest rate policy has been successful. Interest rate differentials were not sufficient to make any appreciable impact on the direction of credit. The fact that a shift in the composition of credit was effected over the period may be attributable to the operation of another policy (discussed below). Then the authorities even admitted (and the records show) that commercial bank liquidity was not affected as desired.

Three of the criteria examined above - rate of inflation, rates of return on investment and rates in the informal sector - indicate that interest rates were low. The result of this policy is to make the already imperfect financial system even less perfect by introducing a distortion - accentuating structure of interest rates. This has the effect of preventing interest

rates from acting as an efficient rationing device. In addition, individuals may have been discouraged or at least not given the incentive to save with financial institutions.

Another consequence of the interest rate structure is that the public debt is made unattractive to hold as wealth. The Central Bank has therefore had to take an ever growing proportion of government debt. The situation is worse for longer-dated government securities. For instance, the Central Bank took up 98.8% of the 18th Development Stock floated in 1979. In 1981 (20th Development Stocks), the corresponding figure was 94.8 (CBN, Report, 1979 and 1981). The monetization of the public debt is clearly inflationary.

Finally, and following from the above discussion, the Central Bank cannot make use of some instruments of monetary policy. Indeed, the reluctance to allow interest rates to rise is the primary cause of the inability of the Bank to use open market operations.

In terms of the demand for and supply of credit, it will be noted that if interest rates are below their equilibrium values or market-clearing levels, there will be excess demand for credit. With effective control on the rate of growth of credit, financial institutions will resort to the rationing of available credit. Rationing may be based on such non-economic factors as political influence which may be less than efficient, i.e. rationing may distort resource allocation. It may also be mentioned by way of passing that under-equilibrium interest rates have the effect of undervaluing future consumption. By making present consumption

cheaper than it is relative to future consumption, such a policy is biased in favour of current consumption thereby leading to a temporal misallocation of resources.

3.4.5 CONCLUDING REMARKS ON INTEREST RATES

The interest rate policy pursued in Nigeria, especially from 1970 to 1981, was that of low, stable, and discriminatory rates. There was a marked unwillingness on the part of the authorities to try out new policies. Although there is no single satisfactory yardstick for judging the appropriate levels of interest rates, the notion that in the long run interest rates should be positive in real terms as measured conventionally remains a minimal requirement for an effective interest rate policy. Nigeria is yet to satisfy that condition.

4. THE MAIN WEAPON OF MONETARY MANAGEMENT IN NIGERIA : MORAL SUASION AND DIRECT CONTROLS

Right from its inception, the Central Bank realized that orthodox monetary weapons were largely inapplicable. In its annual report for the year ending 31 December 1960 it observed that

> 'In present circumstances there is only very limited scope for the employment of monetary measures in dealing with expansionary tendencies or balance of payments difficulties, should this be necessary. It will clearly take time before capital and money markets, which are still in very early stages, have sufficient breadth and activity to make effective the employment of the instruments normally used by Central Banks to influence credit conditions'
>
> (p. 19)

The alternative was moral suasion and direct controls. The need

for restrictive monetary measures first arose in 1964 following the balance of payments crisis of that year. As stated earlier, the First National Development Plan 1962 - 68 was launched in 1962. But government revenue significantly lagged behind expenditure. Furthermore, there were considerable shortfalls in expected foreign capital inflows. The authorities therefore resorted to deficit financing. The balance of payments deteriorated and the level of foreign reserves fell below the official minimum (of two months import bill). A policy of monetary restraint was thus required. But as the Central Bank observed, this

> 'was not an easy task, partly because of the problem of restraining private spending without discouraging capital formation, and partly because of the deficit financing by the governments. In this situation, the Bank had to fall back primarily on a selective control measure based on moral suasion and certain general regulatory measures'
>
> (1964, p. 15)

It then went on to introduce a package of measures the most important aspect for the present purposes being the Guidelines to commercial banks. These were contained in a letter sent to commercial banks in October 1964. A ceiling was placed on the rate of expansion in the aggregate of each bank's loans and advances. Furthermore

> 'the banks were requested to limit the rate of increase of aggregate advances, and specifically to exercise restraint in the granting of loans and advances for financing consumption expenditures, namely loans for less essential imports, advances to hire-purchase companies and individuals'
>
> (1964 p. 15)

The guidelines were retained until November 1966 when they were

as it appeared in the economy
withdrawn as it was heading for a recession. The era of monetary ease which lasted until the end of the civil war then began. However bank credit to the Government rose by 81% in 1967 and 85% in 1968, while loans and advances to the private sector declined by 7.8 and 17.9% respectively. The diversion of resources to the war effort also caused supply shortages (Central Bank of Nigeria, 1975. p. 22).

As the Bank saw it, it had to attempt

> 'to counter positively, at least partially, the inflationary effect of the fiscal measures by inducing increased production in the private sector. In order to achieve this, it was desirable to change the direction of the movement of credit to the private sector, and to channel any allocated increase in credit to productive sectors through selective credit control. Because of the sizeable deficit, however, it was still necessary to hold down the amount of additional credit that should to go the private sector'
>
> (CBN Report, 1969, pp. 12 - 13).

Consequently, from 1969, it started to issue its annual monetary circulars detailing the desired changes in bank credit. The Banking Decree of 1969 gave legal backing to these credit guidelines by empowering the Bank to prescribe fines for banks which did not meet its directives.

4.1 CREDIT GUIDELINES

A hallmark of the working of Monetary Circulars (MC for short) is the categorization of the economy into four : production (consisting of agriculture, mining, manufacturing and real estate and construction) services (made up of public utilities, transport and communications, and, since 1978, export and development and financial institutions), general commerce (defined inclusive

of bills discounted, imports, domestic trade, and, before 1978, export), and 'others' (composed of credit and financial institutions, governments, personal and professional, and miscellaneous). Together, production and services constitute the 'Preferred Sectors' while general commerce and 'others' were regarded as the 'less-preferred sectors'. Sectoral allocations and rates of expansion specified for the preferred sectors were to be interpreted as desired minima while those for the less-preferred sectors were to be regarded as desired maxima.

In the first three monetary circulars, specifications related to the percentage change over the level of credit at the end of the previous year (which coincides with the fiscal year). In 1972, absolute ceilings on the rate of expansion of bank credit were removed and replaced with percentage distribution among the main sectors and subsectors of the economy. But owing to the growing magnitude of the problems which the monetary circulars were supposed to tackle, the Anti-Inflation Task Force recommended in 1975 that the Central Bank should revert to the systems of imposing ceilings on total and sectoral increases in commercial bank credit to the economy (Inflation Task Force, 1975, p. 3). The Government accepted this recommendation and in the Budget of April 1976, it was announced that a 40% ceiling on permissible increase in commercial banks' loans and advances was desired for the year ending 31 March 1977. No limit was placed on credit to agriculture and real estate sectors within the 40% ceiling. Only marginal changes were made in the following years.

Following a recommendation of the Anti-Inflation Task Force, the

credit guidelines were extended to merchant banks for the first time in the fiscal year 1976 - 77. But owing to their relative insignificance their operations are not investigated here.

4.1.1 AN APPRAISAL OF THE CREDIT GUIDELINES

There are many ways in which to evaluate the success of the Central Bank's credit guidelines.The most obvious is to examine how far commercial banks have complied with the directives by comparing the actual performance with the prescribed figures. A second possible way is to examine to what extent the structure of commercial bank loans and advances has changed in the desired direction over the years. Finally, one may consider the influence of the guidelines on the ultimate objectives of monetary policy in Nigeria - price stability and the balance of payments. Of these three alternatives, the last is the most difficult because the objectives are influenced by other policies and factors beyond the control of the monetary authorities. Thus the comments in this connection should be regarded as tentative. The exercise starts with an examination of the effectiveness of the monetary circulars.

4.1.1.1 CREDIT GUIDELINES AND COMMERCIAL BANK PERFORMANCE

Table 4.11 sets out the prescribed and actual distribution of commercial bank loans and advances. Since the civil war was still on in 1969, the year has been excluded.

TABLE 4.11 : LOANS AND ADVANCES OF COMMERCIAL BANKS, %

	PRODUCTION		SERVICES		GENERAL COMMERCE		OTHERS	
	PRESCR	ACTUAL	PRESC	ACTUAL	PRESC	ACTUAL	PRESC	ACTUAL
1970	45	45	50	52	10	2	0	19
1	30	92.6	11.2	77.5	5.1	47.3	-33.6	55
2	45	38.1	11	7.7	32	35.7	12	18.5
3	45	38.3	11	8.1	32	34.4	12	19.2
4	45	43.6	11	7.5	32	30.0	12	18.9
5	48	44.2	10	7.5	32	30.4	10	17.9
6	48	52.1	10	9.2	30	25.1	12	13.6
7	48	53.4	10	9.2	30	23.5	12	13.9
8	50	55.6	10	8.2	28	21.6	12	14.6
9	53	59.3	11	8.2	28	19.2	12	13.3
80	56	60.8	12	8.5	17	18.8	12	11.9
1	56	59.4	12	9.2	17	18.3	12	13.1

SOURCE : CENTRAL BANK OF NIGERIA, ANNUAL REPORT (1970 - 81)

Note: Figures for 1970 and 1971 relate to rate of change over December of previous year's level. Others are percentage distribution (average for period April - December).

Using this yardstick, one may say that the tool has achieved some degree of success. The proportion of bank loans and advances granted to the production sector has risen over the years while the shares of 'others' and general commerce declined. These changes, as explained earlier, are in the desired direction. Table 4.12 presents an alternative view of the distribution of

bank credit.

TABLE 4.12 DEVIATION OF COMMERCIAL BANK LOANS AND ADVANCES FROM TARGET

	PRODUCTION	SERVICES	GENERAL COMMERCE	OTHERS
1972	-15.3	-30.0	11.6	54.2
3	-14.9	-26.4	7.5	60.0
4	-3.1	-31.8	-6.3	57.5
5	-7.9	-25.0	-5.0	79.0
6	8.5	-8.0	-16.2	13.3
7	11.3	-8.0	-21.7	15.8
8	11.2	-18.0	-22.9	21.7
9	11.9	-25.5	-31.4	10.8
80	8.6	-29.5	10.6	-0.8
1	6.1	-23.3	7.6	9.2

SOURCE: TABLE 5.16

Deviation is defined as follows: $\frac{\text{ACTUAL}}{\text{PRESCRIBED}} - 1 \quad \times 100$

This brings out clearly the fact that the target for the services sector has never been attained while that of the 'others' sector has consistently (with the very minor exception of 1980) been exceeded by wide margins, as much as 79% in 1975. In general, the performance in respect of the production and general commerce sectors has been better than that of the services and 'others' sectors. Given the fact that these two sectors (production and general commerce) accounted for 73.8% in 1972 and 77.7% in 1981 of total loans and advances, one may say that the credit guidelines have been relatively effective. The table shows that

performance has been particularly impressive since 1976 (columns 1, 2 and 4). However, the aggregate figures tend to hide the important differences among the subsectors in each sector. Accordingly, a more disaggregated table is provided in Table 4.13.

This table makes clear that the improvement in the share of production was due wholly to the construction subsector and that the target for the other subsectors has never been achieved. The manufacturing subsector has fared particularly badly while the agricultural subsector was slightly better off only from 1978. This slight improvement could be explained in part by the introduction of the Agricultural Credit Guarantee Scheme in 1977 under which the Central Bank guaranteed about 80% of all loans made to agriculture. The favourable treatment accorded the real estate subsector has been explained in terms of the fact that

> 'The demand for residential accommodation has been on the increase, and landlords made brisk business by taking advantage of the favourable interest rate charged on preferred sector loans to put up buildings which carry rather exhibitional rents'
>
> Okogu, 1982, p. 21.

The reduction in the share of the general commerce sector appears to have been achieved at the expense of credit for domestic trade and bills discounted while the import subsector did not suffer appreciably.

Fines were imposed on defaulting banks for the first time in 1977 According to Monetary Policy Circular No. 14 (1982) which repeats

the operation of the penalty,

> 'Where a bank's monthly aggregate of loans and advances, excluding loans for purchase of shares under the Indigenization Scheme, facilities to workers for purchase of cars and loans to Agriculture and Residential Building Construction over and above the minimum prescribed under the guidelines on sectoral allocation of bank credit, rises by more than 30% or 40% as the case may be or its credit to import subsector and the less-preferred sectors in general, exceeds the prescribed percentage, the bank shall receive a warning on the first default. For any subsequent default or continuation of a default, the bank shall pay to the Central Bank a stipulated penalty on the excess credit as follows:

	From 1.1.82	From 1.4.77
1st default	Warning	Warning
2nd default	Payment of 1/16% of Excess Credit	Payment of 1/8% of Excess Credit
3rd default	Payment of 1/8% of Excess Credit	Payment of ¼% Excess Credit
4th default	Payment of 3/16% of Excess Credit	Payment of 3/8% of Excess Credit
5th default	Payment of ¼% of Excess Credit	Payment of ½% of Excess Credit
6th default and subsequent	Payment of ½% of Excess Credit	

> (p. 7)

These figures appear to be very low compared with the monetary cost of granting loans to some subsectors of the preferred sectors especially agriculture. The main element of this cost is the risk of the loan not being repaid i.e. the expected value of bad debt in the preferred sectors exceeds that in the less preferred sectors. Another element of the cost is that loans to the preferred sectors attract lower interest rates than those to the less-preferred sectors. For example, in 1982, interest on loans for agricultural production and residential housing construction was fixed at 6% while the less preferred

TABLE 4.13 : AVERAGE DEVIATION OF COMMERCIAL BANK LOANS AND ADVANCES FROM TARGET (MONTHLY AVERAGES, APRIL TO DECEMBER

	1975	1976	1977	1978	1979	1980	1981
PRODUCTION	-3.8	4.1	5.4	5.6	6.3	4.8	3.4
AGRICULTURE	-3.5	-2.2	-2.1	-1.1	-0.5	-1.2	-0.8
MINING	-0.7	-1.1	-0.9	-1.1	-1.0	-1.1	-1.1
MANUFACTURING	-2.7	-0.6	-2.2	-4.4	-7.0	-5.2	-5.1
CONSTRUCTION	-	-	-1.1	-1.2	1.3	0.2	0.4
RESIDENTIAL BUILDING	-	-	-1.1	-1.2	1.3	0.2	0.4
OTHERS	-	-	11.7	-	-	12.6	10.0
SERVICES	-4.4	-3.1	-3.7	-1.8	-1.8	-3.5	-2.8
PUBLIC UTILITIES	-0.8	-1.0	-0.8	-0.5	-0.9	-1.6	-1.4
TRANSPORT & COMM	-1.7	0.2	-	1.3	-1.9	-2.0	-1.4
EXPORT	-1.9	-2.3	-2.9	-4.0	-4.4	-3.5	-3.6
PRODUCTION & SERVICES	-8.2	1	1.7	3.8	-0.7	-4.2	-5.0
GENERAL COMMERCE	0.5	-2.6	-3.6	-2.4	-0.6	0.3	-0.1
IMPORTS	2.2	-0.1	-0.8	0.9	1.5	0.4	0.7
DOMESTIC TRADE	-1.7	-1.7	-1.7	-2.2	-0.7	-0.7	-0.8
BILLS DISCOUNTED	-0.2	-0.8	-1.1	-1.1	-1.4	-1.5	-
OTHERS	7.9	1.6	1.9	2.6	1.3	3.9	5.1
CREDIT & FIN INTEREST	-0.5	-0.1	-	0.5	-0.4	1.5	2.3
GOVERNMENT	1.4	0.1	1.1	1.5	1.5	0.2	1.2
PERSONAL & PROFESS	2.0	1.3	0.8	0.7	0.2	1.0	0.5
MISCELLANEOUS	5.0	0.5	-	-0.1	-	1.1	1.1
GENERAL COMMERCE & OTHERS	8.2	-1.0	-1.7	-3.8	0.7	4.2	5.0

Deviation = Actual - Prescribed

sectors attracted an interest rate of 12% and the rate on commercial banks' savings deposit was 6½%. In addition, loans to the preferred sectors are in general for longer term than those of the less preferred sectors. On agricultural loans, a leading merchant banker in the country has this to say:

> 'Agriculture has never been an attractive area for the ordinary run of commercial or merchant banks, which do not specialize in financing it. Although financial penalties are now imposed for non-achievement of the minimum lending prescribed for specific sectors ... I believe there are banks that would rather pay the monetary fine than lend to agriculture'
>
> (Onosode, 1981, pp. 16 - 17)

Given these considerations and the fact that compliance with the sectoral allocation directive started to improve dramatically in 1976 while fines were imposed for the first time in 1977, it is difficult to link the improvement with the introduction of penalties. An alternative explanation is that banks took advantage of a loophole in the guidelines. They shifted their loans in favour of real estate in order to avoid the fines while agriculture continued to be underfunded in spite of the penalties and the Agricultural Credit Guarantee Scheme(20). The political climate as expressed in the Indigenization Scheme which started in 1972 was also an important factor. Under the scheme, the ownership of certain enterprises was to pass into the hands of Nigerians while for other categories of enterprises, specified minimum proportions of their equity shares were to be held by Nigerians. It was under the scheme that the Federal Government acquired 60% of the equity shares of all private, foreign- controlled banks in 1976. But of more direct relevance is the Government's official policy. This was made forcibly clear to banks in the experience of Barclays Bank (Nig) Ltd(21). This has taught banks to attach more importance to goodwill than other enterprises.

The observation that the credit guidelines have been relatively

successful in moving credit to the preferred sectors is confirmed by a comparison of the end of year figures for the year in which the Central Bank was established (1959) with those of the last years of the review period. This is done in Table 4.14.

TABLE 4.14 : PERCENTAGE DISTRIBUTION OF COMMERCIAL BANK LOANS AND ADVANCES, END OF DECEMBER

	1959	1977	1978	1979	1980	1981
PRODUCTION	37	55.3	56.5	61.6	60.2	59.3
Agriculture	22.9	4.5	5.5	7.1	7.3	6.9
Mining	1.0	1.2	1.0	1.0	0.8	1.0
Manufacturing	4.1	27.2	27.7	29.4	30.8	31.0
Construction	7.5	21.5	21.5	22.7	20.9	20.4
Bills Discounted	1.5	0.8	1.0	1.4	0.4	-
SERVICES	8.3	12.2	12.1	10.2	12.3	13.4
GENERAL COMMERCE	33.2	22.4	20.2	17.3	18.6	17.1
OTHERS	21.5	10.2	11.2	10.9	8.9	10.1

SOURCE : CBN : ECONOMIC AND FINANCIAL REVIEW 19(2) (Dec.) 1981, ANNUAL REPORT for Dec. 1961. p. 14

Again, the gain by the construction subsector at the expense of agriculture is striking. The proportion of total loans and advances to agriculture fell from 22.9% in 1959 to 6.9% in 1981 while that of construction rose from 7.5% to 20.4% over the same period. The manufacturing subsector also recorded an impressive gain - from 4.1% to 31.0%. The decline in the relative importance of agriculture may not be unconnected with the demise of the agricultural export sector in the 1970's (Appendix Table 6.1)

From this review, one may conclude that the Central Bank's credit guidelines have been relatively successful in moving credit in favour of the production sector. But commercial banks have not complied with the credit guidelines in some other respects. This is especially so in the cases of the services and 'others' sectors, and the intersectoral allocation within the production sector. Compliance has also been less impressive in the last three years in terms of the broad divisions of 'preferred' and 'less-preferred' sectors.

The use of ceilings on and prescriptions of the sectoral allocation of bank credit may be criticised from another point of view. This relates to the desirability of having such controls in the first place. This issue will be considered very briefly in the next section in terms of targets and indicators of monetary policy already introduced in Ch. 3.

4.1.1.2 CREDIT GUIDELINES AND TARGETS AS INDICATORS OF MONETARY POLICY

It was shown in the previous chapter that generally there are two alternative targets and indicators of monetary policy. These are interest rate and monetary aggregates. It was also explained that up to the early 1970's the rate of interest was favoured in most industrial countries whereas from the mid-1970's various countries changed over to the use of monetary aggregates as targets of monetary policy. But from the discussion of interest rate policy above it is evident that the Nigerian authorities have pre-empted the use of interest rates by administering them and keeping them apparently below the market clearing

levels.

Having closed the door to interest rates, the authorities still have three monetary aggregates to consider. These are the base money and broad and narrow money as previously defined. But as shown earlier, the combination of the fiscal operations of the Federal Government and the monetization of the public debt through the government's interest rate policy implies that these candidates for targeting do not pass the controllability criterion enunciated in Ch. 3. This may have prompted the authorities to look for an alternative. The chosen variable is commercial bank credit to the economy which has been the subject of discussion up to this point.

In appraising the use of a specific variable as a monetary target, a question that comes to mind is "Was the target attained?' In the present case, the answer, as seen above, is mixed, i.e. the controllability criterion is not completely satisfied. Another that needs to be answered is 'How relevant is the particular target variable to the ultimate objective of policy?' Finally, one may enquire into the consequences of targeting a particular variable.

It will be explained in the last section of this chapter that until 1977 the Main Macroeconomic problem facing the economy was inflation and that since then both inflation and the balance of payments have dominated policy. In Ch. 5 it will be argued that changes in the money stock constitute one of the most important factors affecting the rate of change of the price

level. Now commercial bank credit to the economy is only one source of monetary expansion and is therefore not a complete measure of the latter. The inflow of external reserves, for example, does not necessarily affect the domestic credit expansion due to commercial banks. But as shown in Ch. 3, it will affect the money supply which, of course, is more important in terms of inflation. The argument that the stock of money is more important than the DCE in the inflation process has been advanced by Sargent according to whom

> 'domestic credit expansion should not be seen as a measure of monetary expansion as such; that is, as something which, set against the flow of goods and services at current prices, monitors the extent of inflationary potential'
>
> (Sargent, 1981, p. 105).

Furthermore, commercial bank credit to the economy is one of two components of DCE; the other is Central Bank credit.

Another aspect of the use of bank credit in Nigeria is that the Central Bank paid more attention to its distribution than to its level. The re-introduction of credit ceiling in 1976, as seen earlier, was due to the recommendation of the Anti-Inflation Task Force to that effect in 1975. Although a re-direction of credit to the 'more productive' sectors of the economy may have a salutory effect on the inflation objective, the extent to which it can do so is not clear; such an effect is likely to be small and may be realized only in the long run through the growth of the economy. Ceilings on credit expansion which were de-emphasized thus appear to be more appropriate than the sectoral distribution of aggregate credit for the inflation objective. The same holds for the balance of payments.

Finally, controls on bank lending often give rise to credit rationing other than by price, especially in the presence of absolute ceilings on credit. Banks may also engage in an unhealthy competition which in the end may drive out the least successful which in Nigeria are the indigenous banks. That some of these banks have not yet failed owes in part to the fact that they are all fully owned by either the Federal or state governments. Their failure would defeat one purpose of economic policy (the 'indigenization' of financial institutions (Nwankwo, 1980)).

In sum, commercial bank credit is not an appropriate target of monetary policy; in particular, the emphasis on its sectoral distribution appears to be misplaced.

4.2 OTHER DIRECT CONTROLS : SPECIAL DEPOSITS

Two types of special deposits were introduced in 1976 along with the cash reserve requirement discussed earlier. These are stabilization securities and letters of deposits. The power to issue and place stabilization securities was conferred on the Central Bank by the 1968 Amendment Decree. But the potential dangers of the exercise of this power are considerable(22). The Bank wisely avoided the use of the power until 1976. Then, in its report submitted to the government in October 1975, the Anti-Inflation Task Force (p. 3) argued for the activation of this weapon. In its White Paper on the Report published in Dec. 1975, the government accepted this recommendation and directed that the 'Bank should now exercise its power of issuing stabilization securities' (p. 26). The Bank obliged in 1976 as stated above.

The securities were based on increases in each bank's savings deposits over the level outstanding on 31 March 1976 and were in respect of deposits in individual savings accounts not exceeding ₦20,000 each. The securities earned an interest rate of 4%. In 1978, the securities were made compulsory for banks with savings deposits of ₦50 m or more and the amount to be subscribed to by the affected banks was fixed at 50% of the increase in savings deposits as above. The securities were to be non-negotiable, non-transferable and non-eligible for calculating the statutory liquidity ratio.

The exclusion of these assets from the calculation of the liquidity ratio had some perceptible impact. The mean of the average monthly ratio was as follows:

1975	68.5%	1978	38.4%
1976	58.1%	1979	45.1%
1977	52.7%	1980	47.6%

This development lends support to the suggestion made earlier that the composition of eligible reserve assets should be defined less broadly than it is at present.

To round up the discussion of the conduct of monetary policy, the impact of policy on the economy will be briefly examined by considering the movement in the money supply, consumer prices and the balance of payments.

5 THE IMPACT OF MONETARY POLICY ON THE MONEY SUPPLY AND THE PRICE LEVEL

The relationship between money and prices in Nigeria is explored

in Chapter 5. The present exercise is confined to the changes in the two series. The annual percentage changes in money and prices are set out in Chart 5.3 and App. Table 5.1.

Both narrow and broad money show a pattern of acceleration in the rates of growth at the beginning and end of the decades and corresponding deceleration in the middle. This is unconnected with the policies pursued during the period. The deceleration in the period 1965 to 1968 may be attributed to the political instability of the time. As the end of the war became increasingly obvious in 1969, some of the restrictions were removed (Aboyade and Ayida, 1971; SNDP, pp. 17 - 20). This released part of the pent up demand, leading to an acceleration of the rate of growth of both M_1 and M_2 as well as the rate of inflation. The effect of the progressive liberalization of economic policy (such as the easing of foreign exchange controls and the abolition of the compulsory saving scheme) seems to have filtered out by 1972, hence the fall in the rate of monetary expansion and the rate of inflation. But in 1973, the first round of oil price increases took place. As made clear in Ch. 3, the ensuing inflow of foreign reserve which the government decided to monetize had a great impact on high powered money and consequently on the money supply. The biggest increase in reserve flow and the highest level of foreign reserves were recorded in 1974. Government expenditure reacted with a lag of about a year and the full impact of the development was felt in the monetary sector in 1975. Also, in that year, the biggest wage increases were made. Together, these factors accounted for the unprecedented growth in the money supply and increase in the price level bet-

ween 1974 and 1977.

Owing to the depression in the world oil market and the consequent decline in oil production and export in Nigeria, there was a decline in the level of economic activity in 1977 and 1978. In particular, government revenue and expenditure in nominal terms fell in 1978 and the GDP in real terms declined absolutely.

There was considerable improvement in the oil sector in 1979 with respect to government revenue and foreign exchange earnings. This enabled the government to increase its expenditure the effect of which was felt in 1980 in the monetary sector.

The most important factors affecting the money supply and the price level therefore appear to be government fiscal operations and reserve flows during the 1970's. In the earlier years, the money supply was dominated by government financial requirements.

6 EVOLUTION OF MONETARY PROBLEMS AND POLICY

So far the use of specific weapons of monetary policy and their impact have been considered in a piece meal fashion. This approach does not provide an integrated picture of the evolution and development of monetary policy. The aim of this historical survey is to present a summary account of the problems confronting the economy to which monetary policy was applied. Inflation and balance of payments policies are reviewed in Chs. 5 and 6 respectively.

The review period has been divided into three phases. There is nothing special about the particular dates chosen apart from analytical convenience.

6.1 THE FIRST PHASE : 1959 - 62

One of the principal objectives of the Central Bank of Nigeria is to issue legal tender currency in Nigeria. This was the first task it undertook on its establishment. But the various advisers consulted on the establishment of the Bank had expressed great concern over the potential dangers of the Bank in generating an 'inflationary pressure.' According to Fisher (1952, p. 7), 'lending by a central bank can have greater expansionary effects' than a commercial bank or a currency board. The World Bank Mission also voiced the same concern (IBRD, 1955). This view was accepted by government as seen in Ch. 1.

The main preoccupation of the Bank during this period therefore was with issuing and strengthening an indigenous currency. In addition to linking the Nigerian pound to the pound sterling, the Bank followed the recommendation of the World Bank Mission that

> 'the new (currency) issue like the old should be backed by sterling. Foreign exchange reserves should not fall below 100% of the currency issue in the foreseeable future'
>
> (IBRD, 1955, p. 97)

Its current liabilities were backed by almost 100% in the first two years.

Ostensibly to strengthen further the power of the Bank to defend the external value of the Nigerian pound, the government decided

to centralize in its control the external reserves of the country. Hitherto, these had been held in London as long-term securities by various official, semi-official and private bodies. However, the real reason for this decision appears to be the desire for administrative controls over foreign exchange transactions. Controls would have been difficult without the centralization of reserves in an official institution.

Recognizing the fact that the effectiveness of monetary policy is constrained by the absence of the requisite financial institutions, it set out to lay and nurture the foundation for the operation of a modern financial market. First, it took steps to improve the efficiency of the commercial banks which are central to the effectiveness of any financial or monetary policy. These included bank examination which helped to enforce standards thus building public confidence in the banks; the establishment of clearing houses at some of its branches; and the meeting of the Bankers' Committee which facilitated exchange of views between it and the commercial banks.

Above all, it launched the money market in 1960 with the first issue of Treasury bills. This was followed by the establishment of the Call Money Fund and the Commercial Bill Finance Scheme in 1962. The Bank has been supporting the money market by providing rediscount facilities where applicable. The Lagos Stock Exchange opened for business in 1961 for dealings in private and public securities.

Finally, in 1962, the Bank reduced the minimum ratio of liquid

assets to total demand and time deposits to 25% - the level at which it has remained ever since.

6.2 PHASE TWO : 1962 - 70

Government's financial needs made it impossible to maintain the 100% backing of the currency indefinitely. Besides, full backing of the currency implies a complete dependence of the money supply on the balance of payments as under the currency system and this was an unacceptable situation (Nwankwo, 1980, pp. 3 - 4). Fiduciary element was introduced in 1961. By the end of the year the ratio of reserves to total demand liabilities had fallen to 80.3%. At the end of 1962 and 1963 the ratio stood at 84.6% and 55.6% respectively. The progressive expansion of the fiduciary element continued until the outbreak of the civil war in 1967.

As seen in Ch. 2, less than half of the expected capital inflow under the First National Development Plan launched in 1962 had materialized by the end of the plan period. The country therefore had to look inwards for internal sources. But revenue failed to expand sufficiently fast to keep pace with expenditure. Private financing for the government from the non-bank public also proved disappointing. During this period, the balance of payments deteriorated sharply (see Ch. 6). In 1964 the level of external reserves fell below the official target minimum. This trend was accentuated by the civil disturbances that began in 1965. As all other sources of finance failed, the government resorted to deficit financing. This was reflected in the growth of the public debt which rose from ₦90 m at the end of

1962 to ₦800 m at the end of 1964, with over 75% being derived from inflationary sources (CBN Annual Report 1964, p. 12). The size of the budget deficit also rose. Aggregate credit to the economy, especially the part going to the public sector, as well as the money supply grew (comparatively) rapidly. According to one view, this tended to generate inflationary pressures which appeared 'to have been deflected to the external sector' (Falegan, 1978), hence the deterioration in the balance of payments. Despite this development, the government insisted that the cost of its borrowing should be kept low. The Central Bank thus found itself in a dilemma : measures taken to improve the balance of payments position (primarily through tight credit policy) would be incompatible with its role in providing development finance for the government. This was the beginning of the low interest policy criticized at length in the text.

The Central Bank Act was amended in 1962 in order to increase the ability of the Bank to lend to the government (as well as to regulate commercial bank activities). The Bank was permitted to hold its assets in other currencies besides the Nigerian pound and pound sterling. This was not possible under the original Act. Previously it held dollars but could not include its holding in the calculation of its reserves. Furthermore, the amendment raised substantially the ceiling on the fiduciary element which could not rise to 60% before 1965 under the 1958 Act.

The Bank started to pursue a 'cheap money' policy in 1962. In order to finance the growing budget deficit arising principally

from, first, the implementation of the public sector programmes under the Plan and, then, the prosecution of the civil war. Development Loan stocks totalling ₦246.8 m were issued between May 1958 and March 1969 out of which the Bank underwrote over ₦192 million. Its holding of Treasury bills also increased. The discount rate had to be kept deliberately low in order to minimize the cost of government borrowing.

Matters came to a head in 1964 with the depletion of foreign reserves to the level already mentioned. This roused the Bank to action and as it observed,

> 'It may be said that 1964 marked a new stage in monetary management in Nigeria : a year when passive monetary policy, in vogue since the West African Currency Board, was replaced by a conscious effort on the part of the Central Bank and the Government to influence the rate of credit creation and patterns of expenditure'
>
> (Annual Report 1964, p. 10)

The relevant policy at the time was credit restraint. But the Bank was handicapped by three considerations in successfully executing a tight credit policy. First, its primary objective in that period was facilitating economic development through its policy of monetary ease. An anti-inflation or a deflationary policy was likely to affect adversely capital formation (through credit squeeze and the inevitable rise in interest rates). Secondly, any success achieved with its deflationary policy was likely to be neutralized by the growing deficit in the government budget. Finally, the absence of the requisite institutional framework curtailed considerably the choice of instruments of policy. Under those circumstances 'the bank had to fall back primarily on a selective control measure based on

moral suasion, and certain general regulatory measures' (Annual Report 1964).

It then imposed the ceilings discussed above.

The civil war that ended in 1970 began in 1967. No guidelines were issued again between November 1966 and June 1969 as the objective of monetary policy was to channel credit to the public sector for the prosecution of the war. The Bank switched back to its policy of monetary ease. The balance of payments deteriorated but the problem was left to fiscal policy since 'Monetary policy does not yet have a cure for adverse movements in the economy caused by political uncertainty' (Ekukinam, 1968, p. 220).

As the war progressed beyond expectations some of the measures already reviewed were taken. These included the amendments to the Treasury Bill Acts and the Central Bank Acts as well as changes in the minimum lending rate, and the introduction of Treasury certificates (in 1968), all with the aim of widening the scope for public sector borrowing while at the same time keeping down the cost of such borrowing. Credit to the economy increased sharply.

In order to protect the balance of payments position, the government adopted stringent fiscal (see Ch. 2) and direct exchange control measures (discussed in Ch. 6) which proved to be effective. The domestic sector therefore bore the brunt of the pressure exerted by the expanded aggregate demand. This was effect-

ively restrained until when, following the drawing to an end of the war, some of the restrictions were removed. The officially recorded price level which declined by 3.7% and 0.4% in 1967 and 1968 respectively rose by 10% in 1969. This spurred the Bank into action but the only weapon it used was its selective credit control which it started to issue in that year in the form of 'Monetary Circulars' as detailed in the text.

In sum, monetary policy started to be used actively in 1964 but its use was short-lived because of the crises of the mid-1960's. Apart from the brief period of 1964 - 66, the major objective of monetary policy was the financing of government expenditure, first, under the First National Plan, and, secondly, during the war.

6.3 THIRD PHASE : 1971 - 81

Inflation continued to dominate policy considerations throughout this period. By March 1970 a Price Control Board to fix and enforce the prices of most essential commodities had been set up. But the problem worsened to such an extent that the government appointed an "Anti-Inflation Task Force' in 1975. In 1977 the balance of payments position became a major source of concern. These two problems persisted to the end of the review period and even beyond.

In the early part of this phase the Central Bank continued to rely on moral suasion and other related measures. But as seen earlier, monetary policy was largely ineffective. 'Monetary Circular No. 3' of 1971 had placed ceilings on the growth of

commercial bank credit to the economy. But at the end of the year it was found that

> 'In general, the commercial banks did not comply with (these) directives ... Their total loans and advances outstanding rose by 42.6% compared with the policy prescription of 8.4%. The permissible limits of credit to each sector were exceeded by very substantial margins'
>
> (Annual Report 1971, p. 46).

This non-compliance, it will be remembered from earlier discussions, was to be a recurring feature of the credit guidelines.

In 1971, for the first time in many years, the central government realized an overall surplus in its budget (Table 2.1). Part of this was used to liquidate its indebtedness to the banking system. By 1974, following the inflow of petroleum receipts on an unexpected scale, it had become a net lender to the system. But this development was not altogether beneficial to monetary policy. The increased liquidity of the banking system occasioned by the retirement of part of the government debt posed a problem. As bank liquidity rose, the rate of monetary expansion also accelerated. M_1 rose by 42.5 and 73.5 in 1974 and 1975 respectively compared with a figure of only 11.3 and 18.1% two years previously. The following measures were some of those taken to reduce the rate of monetary growth. Ceiling re-imposed in 1977; minuscule upward adjustments in interest rates were made; stabilization securities started to be issued in 1976; in the same year a cash ratio requirement was introduced and a call for special deposits made while some assets - e.g. deposits against letters of credit and cash deposits at the Central Bank in fulfilment of the cash ratio requirements - were excluded from the calculation of liquid assets for the statutory liquidy require-

ments; and merchant banks were brought under the umbrella of the credit guidelines in 1978.

But, as stressed in the text, these measures did not produce the intended effect of reducing commercial bank liquidity considerably. The problems which monetary policy was expected to solve - inflation and the balance of payments disequilibrium - became worse over time.

7. GENERAL EVALUATION OF MONETARY POLICY AND SUMMARY

7.1 GENERAL ASSESSMENT

Except for the brief period 1964 - 66 discretionary monetary policy was virtually non-existent in Nigeria in the 1960's. The only weapon used during this time was the minimum lending rate which, as seen above, was not designed to influence commercial bank credit. As such it was not used as a weapon of monetary control. Nevertheless the changes to the rate made during this time reflected the thinking within the British monetary tradition (in which monetary policy in Nigeria was expected to be conducted) that the best target and indicator of monetary policy was the rate of interest. The political crises and the civil war which followed introduced a great deal of uncertainty into the financial system and the incomplete coverage of data on the relevant variables all contribute to make the criteria developed in Ch. 3 inapplicable to this period.

The interesting period is thus the one since 1970. This also corresponds to the period of interest rate administration. The

administrative control of interest rates precludes them from serving as either targets or indicators of monetary policy. Thus both the money and bond markets were of little relevance to monetary policy since the yields of securities were also administered.

Pegging interest rates at predetermined levels implies that the money supply was allowed to find its level. Still, if it could be shown that the money supply was influenced by the prevailing rates of interest, it would still be possible to realize a desired level of the money stock by setting interest rates appropriately. However, it was clear that the authorities were neither interested in a specific definition of the money supply such as M_1 or M_2 nor in total bank credit; instead emphasis was on the distribution of commercial bank credit as detailed above. The use of selective credit control to effect a change in the distribution of bank credit then constituted the Central Bank's monetary policy. Strictly speaking, it is difficult to link the distribution of bank credit to any of the objectives of monetary policy. But this is an issue that is taken up below.

The performance of the credit guidelines in relation to the targets was reviewed above. Using the first set of criteria for assessing policy proposed in Ch. 1, monetary policy in Nigeria must be judged to have had mixed success - the conclusion arrived at in relation to the effectiveness of the credit guidelines of moving credit in the desired direction. Theoretically, credit guidelines can be made effective if sufficient penalties are imposed. But the authorities decided not to take that option.

But using the second set of criteria, the conclusion is strongly negative : Nigeria does not appear to have pursued any particular monetary policy. The rates of monetary expansion were excessive given the growth of output, and interest rates were not used for judging the stance or effect of policy. Criteria for determining the timing and the magnitude of the interest rates were not made public and the justification usually given by the Central Bank (such as 'in view of the growing liquidity of the economy') is inadequate in the light of the changes themselves. A prime example of this point is the explanation of the downward revision of interest rates in 1975 to reduce inflationary pressure already mentioned. Since the exchange rate also was administered from 1973, the changes in interest rates were unconnected with exchange rate considerations. It is therefore necessary to re-evaluate the philosophy behind the Bank's use of interest rates.

The most important conclusion of the investigation into the demand for money in Nigeria undertaken in Ch. 3 is that as of now it is difficult to relate the demand for money in the country to a few variables i.e. the existence of a stable demand function in Nigeria is yet to be established. The stability tests carried out (but not reported) merely served to confirm this proposition. It was also pointed out in that chapter that this had profound implications for monetary policy. When the absence of a stable demand for money function is combined with the inability of the Central Bank to influence appreciably the determinants of the money stock (monetary base and multiplier) shown in the same chapter, it is not surprising that monetary policy in Nigeria has been ineffective. As Boorman (1972, pp. 250 - 51) has

remarked,

> The stability of the money demand function, together with a capacity on the part of the monetary authority to influence closely the stock of assets corresponding to the theoretical concept of money employed in that function would seem to be necessary conditions for the successful implementation of monetary policy'.

One of the reasons suggested for the behaviour of the money demand function observed in Ch. 3 is the administered nature of the interest rates. The argument advanced there was that the pegging of interest rates removed the sensitivity of the demand for money to changes in interest rates. However, if one pursues this argument further, one would find himself in a vicious cycle : the authorities discounted the use of interest rates because the rates were not important determinants of the demand for money; since the rates were pegged they could not influence the demand for money; and so on. Since the administration of interest rates started in 1970, one may wish to test whether official policy had a role to play in the abnormal behaviour of money demand in the country. For this purpose, a money demand function covering the period to 1969 was estimated. The results were even worse than those for longer or later periods. Also, it has been explained that changes in interest rates before 1970 were dictated by changes in the Bank of England minimum lending rate and the London money market rates in general. This suggests that the demand for money in Nigeria may be related to the interest rates in the U.K. during this period. Iyoha (1976) has tested this hypothesis by estimating a money demand function covering the period 1950 - 65 with income and the 'U.K. bond rate' as the explanatory variables. But 'the results were not very

encouraging as interest rate coefficient was usually insignificant and sometimes had the wrong sign' (p. 392). Of course, it is possible to argue that the interest rate used was inappropriate and so the results are inconclusive with respect to the influence of U.K. interest rates on the demand for money in Nigeria. However, so far available evidence tends to suggest that the demand for money in Nigeria is insensitive to interest rates, domestic and foreign. This does not imply that the demand for money would still have been interest-inelastic even in the absence of controls on interest rates. A possible explanation for the failure of money demand in Nigeria to respond to interest rates found by Iyoha is that during the period covered by his study the financial system was very rudimentary. But many changes have occurred in the system since then and if there had been no interest rate controls the money demand function might have behaved better.

In spite of this apparent ineffectiveness of interest rates, the Central Bank made use of them frequently from 1975 as is evident from the earlier discussion. The reasons usually given were to reduce bank liquidity, to stimulate investment in the more productive sectors and discourage the flow of credit to the less productive sectors, and to stimulate savings, agricultural and local industrial production (e.g. Annual Report, 1976, pp. 5 - 6; 1977, pp 5, 45; 1978, pp. 5, 46 - 47). In order to achieve this, interest rates were usually revised by 1% or so while the 'productive sectors' attract lower rates than the 'less productive sectors'. As the interest rates were raised (or reduced) by only a percentage point while the annual rate of inflation averaged over 10%, and, given the quantitative controls on the

sectoral allocation of bank credit instead of total credit, one may say that the authorities did not expect interest rates to affect the overall availability of credit to the economy - a result that was reached earlier on. It is also doubtful if the Bank expected interest rates to achieve the other objectives of re-distributing credit in favour of some sectors at the expense of others, given that demand for credit has been found to be un-responsive to interest rates.

In order to get at the reasons behind the use of interest rates by the Bank one has to look beyond its published statements of objectives. An obvious source of information in this regard is academic thinking within the Bank. Results of research at the Bank tend to suggest that the government's fiscal operations are to blame for the economic malaise of the country and that monetary policy is ineffective until government spending is brought under control (Nwade, 1977; Akinnifesi and Phillips, 1978; Falegan, 1978). In other words, monetary policy is powerless in respect of inflation, balance of payments, disequilibrium and unemployment.

One may then say that the Bank did not really believe in the efficacy of interest rates or monetary policy in general for that matter. Still, it does not explain its use of interest rates. The reason behind its interest rate policy suggested here is that the changes were forced on it. This conclusion is based on the following considerations. Since the commencement of the active use of interest rates, the changes have always been announced by the Federal Commissioner/Minister of Finance in the

budget. Although it is difficult for the outsider to determine how much consultation goes on behind the scenes, one may say that the level of such consultation is probably low for a reason to be given presently. Secondly, as seen above, studies in the Bank agree that interest rates as they now exist are ineffective. Thirdly, the conclusion of the earlier discussion of Central Bank - government relationship is that the former is in practice not independent of the latter, specifically the Ministry of Finance. This point is supported by the fact that the Bank was forced to issue stabilization securities and call for special deposits from 1976. In a public lecture delivered recently, the Governor of the Bank touched the issue of the absence of the independence of the Bank in the following manner:

> 'Under the military regime (1966 - 1979), the powers and independence earlier conferred on the Central Bank by Acts of Parliament were persistently eroded'
>
> (Vincent, 1979, p. 12).

According to him, the necessity for a central bank to 'co-operate with the whims and caprices of the government of the day is one of the fundamental problems of monetary management' (p. 9).

7.2 SUMMARY

This chapter has shown that monetary policy in Nigeria over the last two and a half decades has met with limited success in achieving the usual objectives relating to prices, the balance of payments and income. This is not surprising as it was demonstrated in the previous chapter that the Central Bank does not have an effective control over the stock of money. The inability of the Bank to influence the money stock was attributed to,

among other things, the influence of reserve flows and the fiscal activities of the Federal Government. In the present chapter it has been argued that the pegging of interest rates at very low levels together with the existence of a high and volatile level of commercial banks' excess reserves rendered most conventional weapons of monetary policy, particularly open market operations, liquidity ratio and the discount rate, ineffective or inoperative. Consequently, the Bank relied mainly on selective credit control.

The particular form of this weapon chosen by the Bank was the issuing of credit guidelines to commercial and (later) merchant banks on the growth of aggregate credit and the distribution among the main classes of borrowers. As a target of monetary policy, ceilings on the growth of and the distribution of commercial bank aggregate credit is inappropriate because it is outside the control of the monetary authorities. The achievement of the target requires the co-operation of the banks which cannot be taken for granted as shown by the experience with the system. The stipulation of the sectoral allocation of credit (in which the sectors to which the banks are reluctant to lend (e.g. agriculture) are given a large share in addition to attracting substantially lower than average interest rates) especially is in conflict with the profit-maximizing behaviour of banks. At a more fundamental level, there is the question of the relevance of sectoral distribution of bank credit to the ultimate objectives of macroeconomic policy in the country identified in Ch. 1. Yet, the Bank paid more attention to the allocation of credit than to its growth rate.

Over the review period, then, the two main determinants of the money stock were the balance of payments and the fiscal operations of the government. On the other hand, the greatest limitations on the effectiveness of monetary policy in the country are the fiscal deficit and government intervention in the formulation and execution of monetary policy by the Central Bank. In the context of policy, it is government expenditure and interference which are the relevant variables. Consultation and co-operation between the Bank and the Government are preconditions for an effective monetary policy.

FOOTNOTES : CHAPTER FOUR

1. For instance, in 1963 there were seventeen banks with 218 offices. 192 of these were owned by the largest five which controlled 75% of the banking business (Olakanpo, 1965, p. 17).

2. According to Soyode and Oyejide (1975, p. 122), most commercial bank branch offices are concentrated in Lagos, Ibadan, Kaduna, Enugu and Port Harcourt. In 1977, Lagos State, with an estimated 2.6% of the total population of Nigeria, had 100 bank offices or 21% of the total (Nwankwo, 1980, p. 65).

3. Most indigenous banks in Nigeria are completely owned by state governments. The FG set 60% as the minimum indigenous equity participation in all banks w.e.f. 1976. Governments have controlling interests in all but three minor banks. Ojo and Adewunmi (1982, p. 47).

4. Total assets/liabilities rose more than 7 -fold between 1970 and 1978 (Okigbo, 1981, p. 97).

5. There are more than 137,000 persons to a branch office in Nigeria (Okigbo, 1981, p. 100).

6. Okigbo (1981, p. 121). According to Nwankwo (1980, p. 90), 'the Indigenization Decree, the oil boom and the Third Plan ... explain the upsurge of merchant banking in the country in the mid-1970's'.

7. At the end of 1981 there were 84 registered insurance companies compared to 20 commercial banks. But of the former, only 20 reported on their operations. A year earlier 27 of the 72 registered insurance companies reported to the CBN as required by law (CBN, Report, 1980, p. 69; 1981, pp. 34, 64).

8. These last three assets were introduced by the CBN in 1975 to combat the growing scarcity of shortterm investment outlets owing to reduced government borrowing in mid-1970's occasioned by the increased earnings from oil. e.g. The amount of the Treasury debt instruments outstanding stagnated at their 1971 level until 1977 when Government revenue slumped. See Ojo and Adewunmi (1982, pp. 228 - 19). CDs and BUF are interbank debt instruments.

9. See footnote 8 above.

10. This obvious reason was suggested by the Bank itself. See its Report for 1980, p. 54.

11. The then Minister of Finance defended government regulation as follows: 'while accepting the universal principle that market forces should be given free play in the determination of prices, we must, by the same token, give due weight

to the fact that as of now there are relatively few stocks on issue. Furthermore, once stocks are purchased, they hardly ever change hands'. (Speech by the Federal Commissioner of Finance at the inauguration of the Capital Issues Commission (Lagos : Federal Ministry of Finance, May, 1973).

12. In addition to those mentioned above, another well known study is Isong (1957, pp. 112 - 14).

13. Although the first issue in 1968 was oversubscribed, mainly by the commercial banks (Udo-Aka, 1971, p. 23), in recent years the CBN has had to take up sizeable amounts of the asset. On average, it held 50.7% in 1980 compared to 28% held by commercial banks.

14. Courakis (1977, p. 23) cites this as the main reason for the non-use of the weapon in W. Germany until recently.

15. For instance, under the 1962 amendment of the Central Bank Act, commercial banks could include up to 7½% of their externally-held assets in the calculation of the liquidity ratio. This was reduced to 3% in 1964 and abolished in 1964. The changes were designed to encourage banks to repatriate their foreign assets from abroad.

16. This argument is often couched in terms of the so-called 'vicious cycle of poverty'.

17. These are the First Bank of Nigeria, United Bank for Africa and Union Bank of Nigeria. See Ojo and Adewunmi (1982, p. 51) for details.

18. For a selection of these criteria see Chandavarkar (1971), Khatkhate (1980) and Leite (1982).

19. A classic reference on this point is Myrdal (1967). See also Bruton (1973).

20. This line or agrument is suggested by Okogu (1982, p. 24).

21. The occasion was a politically objectionable statement made by the Chairman of Barclays Bank International concerning the association of the bank with S. Africa. The Nigerian Federal Government responded by directing all governments and government-controlled institutions in the country to withdraw their accounts from Barclays Bank (Nig) Ltd in 1978. Although the directive applied only to official institutions, most private customers of the bank transferred their businesses to other banks probably for fear of the bank going insolvent as heppened in the early 1950's. This created a lot of problem for the bank. As part of its survival measures, it changed its name to Union Bank of Nigeria Ltd which is its present name. It survived the trauma but incurred heavy public relations expenses.

The influence of political pressure is greater than one

would expect. Name changing is a reflection of this climate. Other instances in which banks changed their names were politically motivated too. First the Barclays Bank shortened the tag 'Dominion, Colonial and Overseas' to DCO in the 1950's; at independence, it dropped it altogether. Then, the Bank of British West Africa removed the 'British' with the independence of Ghana in 1957. In 1964, it merged with the Standard Bank of South Africa and in 1969 it changed its name to Standard Bank (Nig) Ltd. when it took out a Nigerian Incorporation in compliance with the Banking Decree of that year. But with the increasingly anti-apartheid stance of the Federal Government, the association with S. Africa became a liability. In order to improve its public image, the bank changed its name to First Bank of Nigeria Ltd in 1979. Finally, the United Bank for Africa (which, together with the other two banks mentioned above, constitutes the three largest banks) was originally known as British and Franch Bank.

The willingness of banks to change names and to assume the associated promotion expenses shows how much importance they attach to goodwill or public image.

22. The relevant part of the amendment empowers the Central Bank to 'issue, place, sell, repurchase, amortize or redeem securities to be known as "stabilization securities" (which shall constitute its obligations) and the securities shall be issued at such rate of interest and under such conditions of maturity, amortization, negotiability and redemption as the Bank may deem appropriate'. In case of default, the Bank can 'prohibit'the institution concerned from extending new loans and advances and from undertaking new investments until full compliance has been obtained' (Nwankmo, 1980, p. 31). Under the 1969 Banking Amendment Decree, the Bank could take over the business of a commercial bank that failed to follow its directive.

CHAPTER FIVE

INFLATION IN NIGERIA

INTRODUCTION

For reasons already given in Ch. 1, price stability and the balance of payments are the most amenable to appraisal of all the government's objectives of economic policy. The former objective is taken up in this chapter while the latter is reserved for the following chapter.

The aim of the present chapter is two-fold: to explian the behaviour of the price level and to appraise the policies pursued by the authorities in the attempt at achieving the desired degree of price stability. Like many countries in the world, Nigeria did not experience a serious problem with respect to inflation before 1970.

The chapter is divided into three main sections. Section I presents the facts to be explained while Section II is concerned with one specific explanation of inflation - the monetary theory of inflation. Section III deals with another group of explanations which may be called the institutional theory of inflation. The conclusion is contained in the final section.

1. THE BEHAVIOUR OF THE PRICE LEVEL

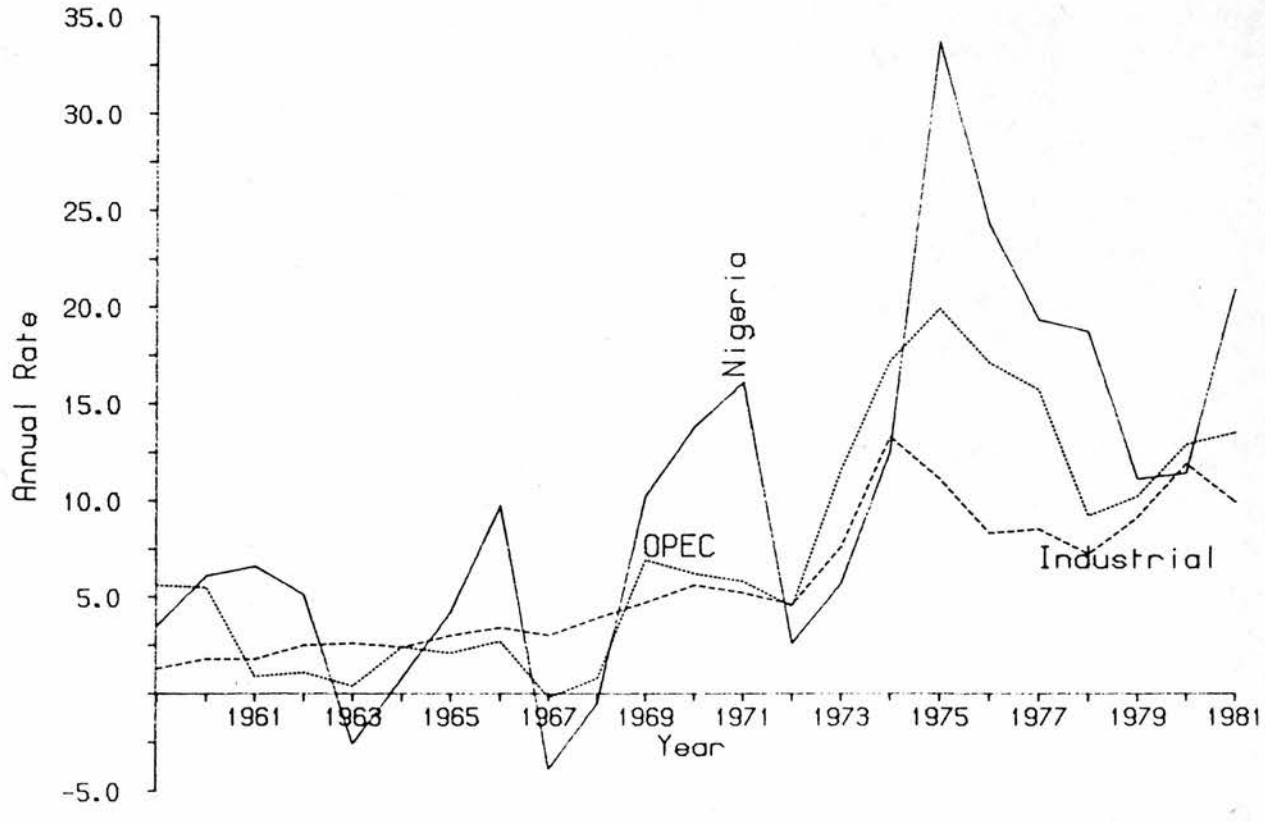
Between 1952 (the earliest year for which price statistics are available on a continuous basis) and 1969, the annual rate of inflation as measured by the consumer price index (CPI) was below 10%. Also, during the same period, the price level declined

absolutely in three years (1963, 1967 and 1968). But in 1969 the annual rate of inflation exceeded 10% and accelerated in the following two years, reaching 16.1% in 1971 after which it started to decelerate. But in 1975, it attained its highest value to date of 33.7%.

Chart 5.1 shows that the annual rate of inflation fluctuated widely around a rising trend until 1975 when a big deceleration that lasted for five years set in. The country appears to have experienced a more rapid rate of inflation than most other countries (excluding of course Latin America) over the period since 1952. Chart 5.1 also presents a visual comparison of inflation rates in Nigeria and the average for OPEC as a whole and industrial countries between 1959 and 1981. From the Chart one may say that from 1959 to 1981 the price level in Nigeria rose more rapidly on an average basis than that in industrial and OPEC countries. This is particularly so between 1975 and 1979. The Chart also shows that until 1972 there was no definite relationship between the average rate of inflation in OPEC countries of which Nigeria is one and that in industrial countries. But since then the former has consistently exceeded the latter.

Given this background, the task of the next two sections is to analyse the movement of the price level with a view to identifying the factors which affect the rate of inflation in Nigeria. These have been grouped into monetary and non-monetary, and the discussion is organized along those lines. The first examines the influence of money on prices with Nigerian data while the second deals with the institutional explanation. Although

Chart 5.1 : Inflation 1959-81



statistical evidence is consistent with the monetary theory of inflation, it is concluded that non-monetary factors also have a role to play.

2. THE MONETARY THEORY OF INFLATION

For a long time now, money has been singled out as one of the most important factors which determine the price level. The relationship between money and prices was first expressed formally as the Equation of Exchange which was subsequently transformed into the Quantity Theory of Money. This theory attributed changes in the price level primarily to changes in the stock of money, according to Meiselman (1975, p. 70),

> 'In the four centuries since the coronation of Queen Elizabeth I, there is no important episode of inflation or deflation that has been studied which contradicts the general proposition that changes in the price level stem primarily from changes in the nominal stock of money per unit of output'.

This is only one of such statements of which the best known is probably Milton Friedman's assertion that

> 'inflation is always and everywhere a monetary phenomenon ... and can be produced only by a more rapid increase in the quantity of money than in output'
>
> (Friedman, 1970, p. 24).

In support of this contention, Friedman and Schwartz (1982) have recently produced a voluminous amount of statistical evidence for the US and UK which has been summarized, rather unkindly, as 'money causes prices, money does not cause output and nothing else causes prices or output'.

It therefore seems worthwhile to look at the evidence for Nigeria. This is especially so as no such exercise is known to have been

undertaken for the country as at the time of writing. But as emphasized at various points in this study, data limitations preclude any detailed analysis of the proposition. The following exercise is therefore on a very small scale. Furthermore, the results to be obtained are subject to the overall quality of the data used as mentioned in Ch. 1.

2.1 VELOCITY, MONEY AND THE PRICE LEVEL

A basic variant of the quantity equation is given by

$$M V = P Q \qquad (1)$$

where M is the stock of money, V is the velocity of circulation or the ratio of nominal income to money, P is the price level and Q is the value of output. Differentiate equation (1) w.r.t. time and re-arrange to obtain

$$v = p + q - m \qquad (2)$$

where lower case letters represent the rates of change of the respective variables w.r.t. time.

Sometimes it is assumed that V is determined by institutional factors and that these factors do not change rapidly over time (Doblin 1951, esp. p. 202). Therefore, for analytical purposes, v may be set equal to zero in eqn. (2).

Again, assuming for convenience that output grows at a constant rate over time, the rate of change of the price level may be expressed as a linear function of the rate of change of the money stock:

$$p = \alpha_o + \alpha_1 m \qquad (3)$$

This extremely simple equation is at the heart of many models of inflation, the best known of which is probably Cagan (1956).

The assumption of a constant velocity obviously is not very realistic. For example, velocity may be an increasing function of the rate of inflation, (Mundell, 1965). But there are people who argue that velocity is so stable that it may be approximated by a constant over some defined time period (Meiselman, 1975, p. 76; Friedman and Schwartz, 1982, p. 210). However, such conclusions are usually obtained after transforming the data in various ways. Also, the assertion may not be valid for all time periods as Friedman (1959, p. 327) himself acknowledges. Finally, in a cross-section study using data for the post war period in 37 countries to examine the secular behaviour of income velocity, Ezekiel and Adekunle (1969) have found 'a significant inverse relationship between levels of velocity and levels of income'.

Given that v = 0 in eqn (2), eqn (1) may be rearranged to yield

$$P = \alpha_o + \alpha_1 M/(Y/P) \qquad (4)$$

where Y = P Q. This is the form estimated by Meiselman for the US from which he concludes that

> 'the constant term is virtually zero and the regression coefficient essentially unity. This means that prices have varied proportionally with output'
>
> (p. 76)

Since the stability of the relationship between money and prices requires the stability of velocity, it is worth having a second look at the latter variable. The income velocity of four monetary aggregates - Currency (M_0), currency plus demand deposits (M_1), M_1 plus time deposits (M_2) and M_2 plus savings deposits (M_3) - are shown in Chart 5.2 and labelled V_0 - V_3 respectively. It is clear that velocity over this period (1960 - 80) has not been constant and has tended to fall(2). Thus as noted several years ago by Doblin (1951), Selden (1956) and Friedman (1959), velocity has a negative time trend.

Nevertheless, eqn (4) was estimated for Nigeria over the period 1959 - 81:

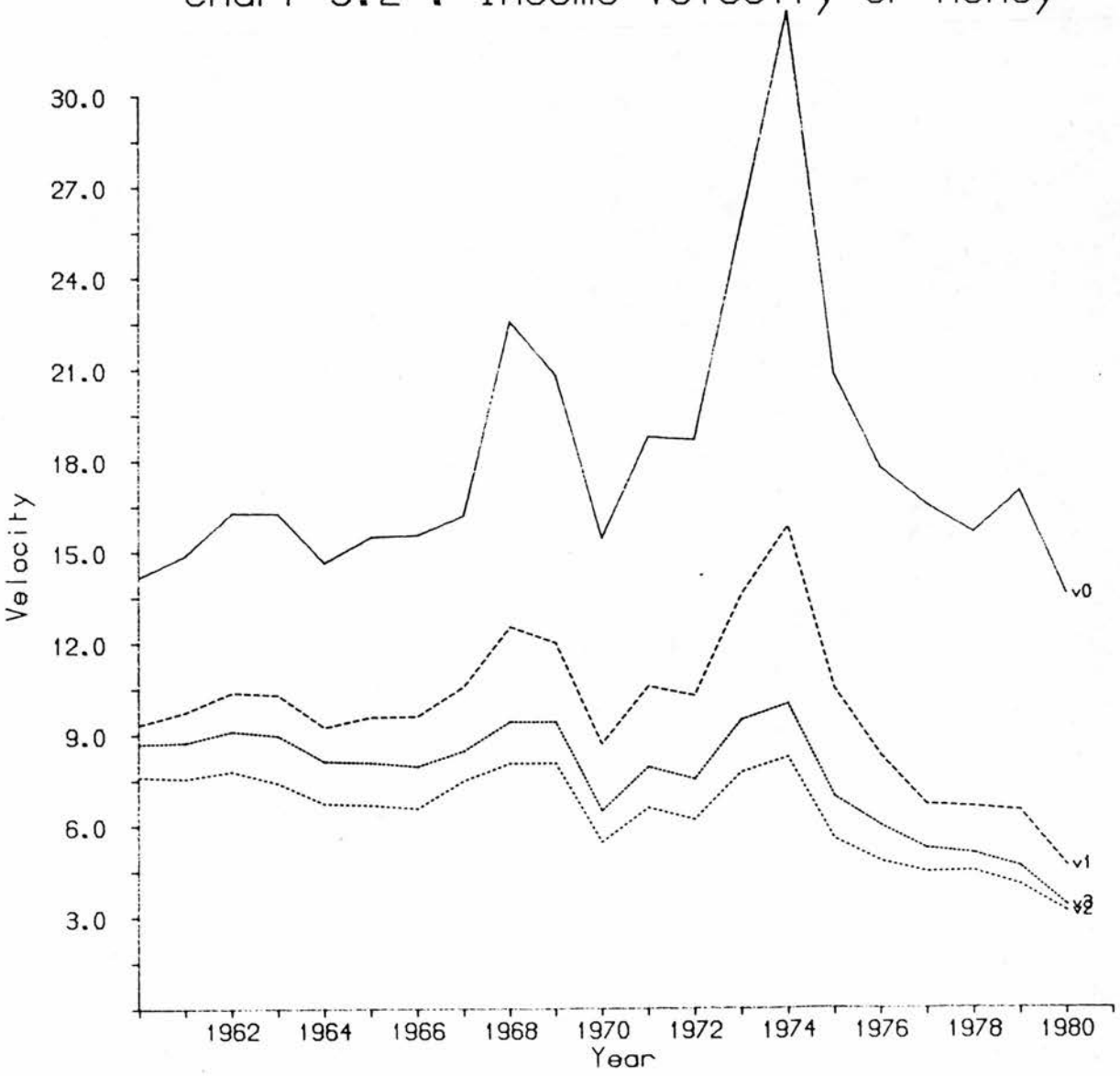
$$P = \underset{(8.0)}{1.35} + \underset{(23.7)}{4.3}\ (M_1/(Y/P)) \qquad \bar{R}^2 = 0.96,\ D\text{-}W = 1.0$$

$$P = \underset{(9.0)}{14.0} + \underset{(25.3)}{2.8}\ (M_2/(Y/P)) \qquad \bar{R}^2 = 0.97,\ D\text{-}W = 0.87$$

Clearly, there is a strong positive statistical relationship between prices and money per unit of output as depicted by the $\bar{R}^2$. But the low D-W (which suggest model misspecification) indicates that the relationship may not be as significant for Nigeria as claimed for the US.

Chart 5.3 shows the close relationship between money and prices. Apart from a few cases, the rates of growth of both variables rise or fall together. Moreover, if they do not achieve local maxima simultaneously, the rate of change of money tends to peak before that of prices.

Chart 5.2 : Income Velocity of Money



2.2 A SIMPLE PRICE EQUATION

From eqn. (3)

$$\dot{p}_t = a_0 + a_1 \dot{m}_t$$

where a dot denotes a rate of change defined as

$$\dot{x}_t = \frac{X_t}{X_{t-1}} - 1$$

In this form the intercept term is supposed to capture the influence of velocity and output which has been assumed away. A straightforward OLS estimation of this eqn. over the 1962 - 81 period yields

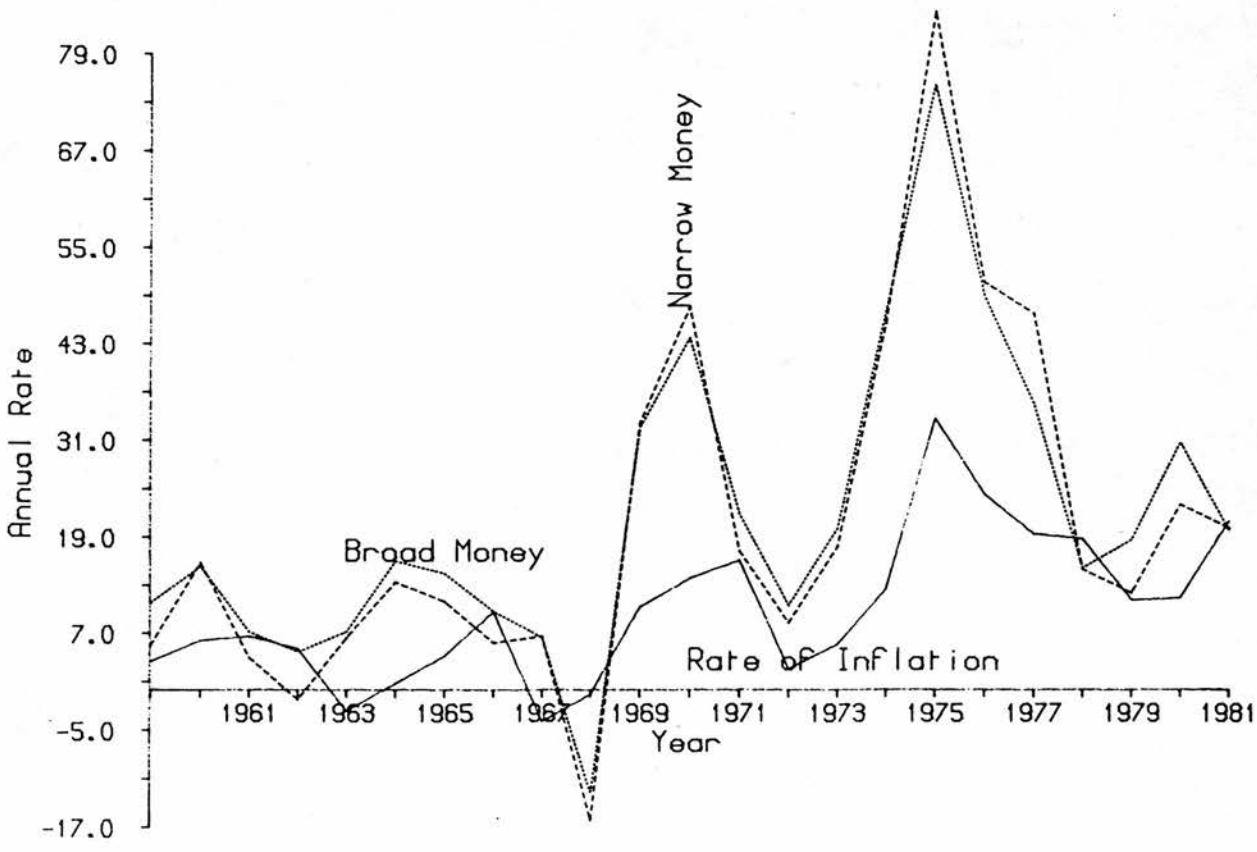
$$p_t = 3.16 + 0.33\ m_{1t}$$
$$\bar{R}^2 = 0.61 \quad D\text{-}W = 1.75 \quad F(1,18) = 31$$

By adding the lagged value of the rate of growth of the money stock, its explanatory power is increased slightly as shown here:

$$p_t = \underset{}{1.56} + \underset{(0.9)}{0.234}\ m_{1t} + \underset{(3.87)}{0.179}\ m_{1t-1} \qquad \underset{(3.0)}{}$$
$$\bar{R}^2 = 0.73 \quad D\text{-}W = 1.87 \quad F(2,27) = 27$$

An even better fit is obtained if these equations are estimated in levels (P_t, M_t) instead of in rates of change. The positive constant in these equations which is in any case statistically insignificant suggests that velocity has not been constant.

Chart 5.3 : Inflation and Monetary Expansion



These results confirm the earlier proposition that money supply and its rate of change are closely related to the price level and the rate of inflation. Although the results tend to corroborate the monetarist contention of inflation being a monetary phenomenon, in recent years doubts have been raised as to whether in fact causation is unidirectional. With respect to the German hyperinflation, for example, Frenkel (1977) is of the view that while increases in the money supply cause inflation, such increases are themselves affected by the rate of inflation. Similarly, after re-examining the hyperinflation cases studied by Cagan (1956), Sargent and Wallace (1973) conclude that causation probably runs both ways. This hypothesis is briefly examined below.

2.3 A TEST OF CAUSALITY

Investigations into the demand for money have suggested that price expectations may constitute an important argument of the function. This is especially so in developing countries where in many instances empirical research has produced results which tend to indicate that income and price expectations are the only relevant variables in the money demand function (e.g. Aghelvi et al, 1979). In conjunction with the results of the previous section, this implies that both money and prices may be interdependent. The general test of the direction of causality used here is the method of correlation and regression.

The simplest test of a linear relationship between two variables is the simple correlation coefficient. Thus the value of this parameter for money and prices indicates the degree of the relationship between the two. For the period 1959 - 81, this

test statistic is 0.992 for Nigeria when the narrow definition is used. For broad money it is 0.994. On the basis of this one may say that the stock of money and the level of prices are highly correlated. However, as is well known, this observed level of statistical association could have been due to a third, common factor in which case one has a situation of spurious correlation (Granger and Newbold, 1974). The influence of the common factor, where present, may be minimized by working with first differences rather than levels if the third variable follows a first-order autoregressive process. Define the first difference of a variable as $\Delta X_t = X_t - X_{t-1}$. Then the simple correlation coefficient between ΔM_t and ΔP_t gives a more reliable guide to the statistical relationship between money and the price level. Assuming that money and prices exhibit a first-order autoregressive process and that the coefficient of autoregression is unity, first differencing renders the residuals white noise. These assumptions were made in the case of Nigerian data and the simple correlation coefficient between ΔM_t and ΔP_t turns out to be 0.794 which is still relatively high (narrow money is used here). The earlier observation is therefore further confirmed by this result : there is a strong positive statistical relationship between money and prices.

But this does not say anything about the direction of causality since correlation is a linear symmetric relation. Besides, in some situations, the present value of a variable may be more highly correlated with the lagged than the current values of another variable. Therefore correlating the contemporaneous values of a variable with the lagged (past or future) values of

another variable achieves two things : it breaks the symmetry and it gives an indication of the probable direction of causality.

On the assumption that first differencing of the price level and the money stock renders the two series covariance stationary, the following exercise was undertaken. Lagged values of the first differences of the two variables were correlated. It is assumed that if the past values of the money supply and the current values of prices are strongly correlated, then causality running from money to prices cannot be rejected. But if in addition a high correlation coefficient is obtained when these variables are interchanged, the conclusion is in favour of interdependence. With this in mind, the relevant results are presented here.

TABLE 5.1a : CORRELATION COEFFICIENTS BETWEEN THE FIRST DIFFERENCES OF MONEY AND PRICES

	ΔP_t	ΔP_{t-1}	ΔP_{t-2}	ΔP_{t-3}
ΔM_t	0.794	0.694	0.527	0.080
ΔM_{t-1}	0.855			
ΔM_{t-2}	0.770			
ΔM_{t-3}	0.644			

TABLE 5.1b : CORRELATION COEFFICIENTS BETWEEN RATES OF CHANGE OF MONEY AND PRICES

	$\dot{P}_t$	$\dot{P}_{t-1}$	$\dot{P}_{t-2}$
$\dot{M}_t$	0.65	0.18	0.12
$\dot{M}_{t-1}$	0.74		
$\dot{M}_{t.2}$	0.26		

Both tables tell the same story in broad terms. It is clear that the highest correlation coefficient in each case is that between the contemporaneous value of the price level and the one-lag value of the money supply. The table also shows that the current money stock is more closely related to the current price level than is the money stock in the previous two or more periods. Furthermore, lagged values of prices are more weakly related to the current money stock than are lagged values of the money supply to the current price level. From the tables, it is also possible to look at the relationship between the current values of one variable and the future values of the other. For instance, the influence of future values of money on the current values of prices is given by the correlation coefficient between ΔP_{t-3} and ΔM_t, ΔM_{t-1} or ΔM_{t-2}. Evidently, the statistical relationship between the current price level and future money stock is relatively weak.

Thus, according to the suggested criterion, money may be said to cause prices. Nevertheless, the correlation between ΔM_t and ΔP_{t-i} $(i > 0)$ is too high for one to rule out the possibility of interdependence.

So far, there is no conclusive test of causality that can be used for all purposes. But one that is often mentioned is that suggested by Granger (1969) and extended by Sims (1972) and others[4]. This test makes use of the predictive power of an equation which uses only the historical values of the variable to be explained relative to one which, in addition, makes use of the contemporaneous and past values of another variable. It

may be illustrated with the help of a bi-variate process represented by $(P_t \; M_t)$ which is assumed to be covariance-stationary i.e. the respective means and variances of the time series are constant over time. The following definitions are utilized:

(a) P^* and M_t^* are the set of all the past values of P and M

(b) P_t^{**} and M_t^{**} are the set of all the past and present values of P and M

(c) $\sigma^2 (P_t \mid X)$ is the minimum predictive error variance of P_t given X where X may be any one of the sets mentioned in (a) and (b).

Then:

(1) M causes P if $\sigma^2 (P_t \mid M_t^*, P_t^*) < \sigma^2 (P_t \mid P_t^*)$

(2) M causes P instantaneously if

$$\sigma^2 (P_t \mid P_t^*, M_t^{**}) < \sigma^2 (P_t \mid P_t^*, M_t^*)$$

(1) asserts that if the additions of the past values of M reduces the predictive error variable of P conditioned upon its past values, then M causes P. (2) states that if the addition of the current values of M to the past values of P and M reduces the predictive error variance of P then M instantaneously causes P. Further casual relations may be obtained by noting that the roles of P and M above may be reversed. Then feed back exists if M causes P and P causes M, i.e. (1) above holds as it stands and when the roles of P and M are reversed. Furthermore, it is possible that neither P nor M causes the other. Then P and M are said to be independent : in eqns (1) and (2), each term is equal to the other (the inequality signs are replaced with the equality signs).

Suppose condition (1) or (2) above has been established (i.e. unidirectional causality). Obviously there comes a time when the addition of more distant values of M increases the error variance. Let the point at which the error variance is at a minimum be reached with M_{t-K}. Then K is the causality lag between P and M.

What is applied here is a variation of the Granger test which has been suggested by Sims (1972). According to him, the test for unidirectional causality between two variables X and Y is

> '...to regress Y on past and future values of X... then if causality runs from X to Y only, future values of X in the regression should have coefficients insignificantly different from zero as a group'
>
> (Sims, 1972, p. 545)

Sims proposes that the data should be prefiltered and suggests a particular filter $(1-.75B)^2$ which, he claims, 'approximately flattens the spectral density of most economic time series". The regression is then given by

$$X_t = \sum_{i=-n_1}^{n_2} \alpha_i \; Y_{t-i} + U_t$$

where U is a disturbance term.

A problem with the application of this proposal, apart from the filter to use, is the determination of the values of n_1 and n_2. However, one particular set of values of n_1 and n_2 has found wide application. This is given by $n_1 = 4$ and $n_2 = 8$ as originally suggested by Sims and used by Barth and Bennett (1974), Williams, Goodhart, and Gowland (1976), and Feige and Pearce (1979) among

others. This set is also used here. The sample period runs from 1970 I to 1982 II which gives a total of 50 observations but the actual number of observations differs from one equation to another because of different lag specifications. All equations include a constant term. The critical values of the F distribution for the different degrees of freedom shown in the results on the next page are

DEGREES OF FREEDOM	CRITICAL VALUES OF F	
	0.05	0.01
12, 24	2.18	3.03
8, 32	2.25	3.12
4, 40	2.61	3.83

A comparison of these figures with the results indicates that at the 1% level of significance, the null hypothesis that the coefficients of all the independent variables are not statistically different from zero cannot be accepted in respect of 1a and 2a, 5a, 6a, 9a - 12a. But even at the 5% level, the same hypothesis cannot be rejected in the case of 3a, 4a, and 7a, although it may be with respect to 8a. The rejection of the hypothesis as regards 1a and 2a implies that past and future values of the money supply are significant in explaining the current price level. Conversely, the acceptance of H_0 in 3a and 4a implies that past and future values of the price level are insignificant in explaining contemporaneous money supply. At this stage, the evidence is unambiguously in favour of money causing prices.

TABLE 5.1 : RESULTS OF ORDINARY LEAST SQUARES REGRESSION :

FILTER = $(1 - 3/4\ B)^2$

	DEPENDENT VARIABLE	INDEPENDENT VARIABLE	LAG : n_1, n_2	$\bar{R}^2$	F STATISTIC	DEGREES OF FREEDOM (F)
1a	P	M_1	4, 8	0.548	4.6	12, 24
2a	P	M_2	"	0.535	4.4	"
3a	M_1	P	"	-0.026	0.9	"
4a	M_2	P	"	0.167	1.6	"
5a	P	M_1	0, 8	0.524	6.5	8, 32
6a	P	M_2	"	0.520	6.4	"
7a	M_1	P	"	0.056	1.3	"
8a	M_2	P	"	0.073	2.6	8, 32
9a	P	M_1	4, 0	0.210	3.9	4, 40
10a	P	M_2	"	0.251	4.7	"
11a	M_1	P	"	0.213	4.0	"
12a	M_2	P	"	0.421	9.0	"

i = 0 is excluded in each case.

It is also necessary to examine the role of past values alone of each variable in explaining the current value of the other i.e. eqns. 5a - 8a. The earlier conclusion is still unaffected by these equations as far as the narrow definition of money is concerned. But a slight qualification is needed in terms of broad money : at the 5% level there is some evidence of causality running from prices to money while at the 1% level no such evidence exists. However, given the low $\bar{R}^2$ in both 7a and 8a relative to 5a and 6a one may conclude that the influence of past values of the price level on the current money supply is negligible.

The rejection of the null hypothesis in respect of 9a and 10a combined with its acceptance in the case of 11a and 12a would almost establish a definite Granger unidirectional causality running from money to prices, given the above results. But while the latter condition is fulfilled the former is not. When account is taken of the earlier inconclusive result with respect to prices 'causing' broad money, the possibility of a feedback causal relation cannot be ruled out completely. The conclusion is therefore that money 'causes' prices with a feedback.

Feige and Pearce (1979) have argued that Sims' test is sensitive to both the lag specification and the filter employed. On the latter, they conclude that 'the particular pre-filter chosen can affect the substantive results of the analysis even when the alternative filters utilized whiten the regression residuals' (p. 530). In order to ascertain the influence of the filter in this particular case, equations 1a - 12a have been re-estimated using the same data set but with a different filter. The chosen filter is the simple one given by (1-B) i.e. logarithmic first differences. The results are presented as equations 1b - 12b in order to aid comparison.

The critical values of the F distribution for the degrees of freedom shown are broadly the same as before except F.05(12, 25) = 2.16 and F.01 (12, 25) = 2.90. The results shown overleaf differ from the earlier ones in some respects. The most significant difference is that the present results emphatically reject the hypothesis of causality running from prices to money: the

TABLE 5.2 : OLS REGRESSION RESULTS : FILTER = (1 - B)

	DEPENDENT VARIABLE	INDEPENDENT VARIABLE	LAG n_1, n_2	$\bar{R}^2$	F STATISTIC	DEGREE OF FREEDOM FOR F
1b	P	M_1	4, 8	0.345	2.64	12, 25
2b	P	M_2	"	0,263	2.10	"
3b	M_1	P	"	0.110	1.38	"
4b	M_2	P	"	0.124	1.43	"
5b	P	M_1	0, 8	0.269	2.89	8, 33
6b	P	M_2	"	0.238	2.60	"
7b	M_1	P	"	-0.0715	0.66	"
8b	M_2	P	"	-0.097	0.55	"
9b	P	M_1	4, 0	0.0097	1.11	4, 41
10b	P	M_2	"	-0.0072	0.9	"
11b	M_1	P	"	0.156	3.08	"
12b	M_2	P	"	0.176	3.41	"

All regressions exclude the cases i = 0

null hypothesis cannot be rejected in 3b, 4b, 7b, 8b, 9b, and 10b at any reasonable level of significance. The implication of this is that past values of the price level are not important in explaining current money supply; neither are future values of the money supply important in explaining current price level. Even a hypothesis of causality running from money to prices can now be accepted only at the 5%. At the 1% level, a null hypothesis of money and prices being statistically independent can no longer be rejected. This leads to the conclusion that at the 5% level, there is evidence of causality running from money to prices without

feedback.

This conclusion is of course different from that reached with respect to the $(1 - 3/4B)^2$ filter. The results are therefore consistent with those obtained by Feige and Pearce. As Sims himself has noted, at the 5% level, the residuals from his regression of GNP on M_1 even after filtering are significantly different from white noise. This casts some doubts on the reliability of the F test and emphasis may be placed on the results obtained earlier here which establishes interdependence between money and prices.

3. INSTITUTIONAL THEORIES OF INFLATION

These theories are based on the premise that a persistently high rate of inflation which may sometimes be accelerating reflects the underlying socio-economic conflicts and tensions (Panic, 1976, p. 1). More specifically, inflation is sometimes seen as one of the results of the competitive struggle of various classes in the society to maintain and, if possible, enlarge their respective shares of the national product. Two classes which have been singled out in this respect for the analysis of inflation are owners of labour and capital. The struggle between these two income groups is often thought to lead to a wage-price spiral : workers press for higher wages which are granted by employers but these in turn pass the higher labour costs back to consumers in the form of higher prices of final consumption goods. Again this leads to the demand for yet higher wages and the process continues ad infinitum. Of recent, a different kind of struggle has been identified : that between different labour

groups themselves. In this case, the outcome is probably a wage-wage spiral (Bispham, 1982, p. 9). Labour is therefore seen to play an important role in the institutional theories of inflation. It therefore seems appropriate to make it the point of departure for the discussion of these theories.

3.1 TRADE UNIONS

The medium through which labour fights for its income shares is the trade unions. This class of theories has therefore assigned a prominent role to trade unions. The intellectual ancestry of the modern versions of these theories may be traced to the work of Phillips (1958), Klein and Ball (1959), Lipsey (1960) and Dicks-Mireaux (1961). The mainstream explanation of inflation based on these works is that inflation varies directly with the excess demand for labour and the rate of increase in import prices and inversely with the rate of productivity growth (Parkin, 1978, p. 11). It was Hines (1964) who first incorporated explicitly the influence of trade unions, a model of inflation in which trade union 'pushfulness' as measured by the rate of change of the labour force unionized is a significant independent cause of inflation. However, Hines' hypothesis has not gained as much ground as the explanations of inflation in terms of the level and changes in the rates of unemployment probably because his index of trade union militancy referred to above reached a peak a long time ago. Furthermore, after a detailed review of Hines' work, Purdy and Zis (1974, p. 34) reached the conclusion that Hines' work is 'extremely unsatisfactory' and 'theoretically weak'. The dominant wage-inflation theory therefore remains one which uses the same measure of the excess demand for labour

rather than union militancy.

But there is no agreement that the labour market is a relevant factor in the explanation of the inflation phenomenon. According to one view,

> '...in the post-war era in Britain ... organized labour has had (the) capacity, by increasing general pay levels faster than productivity increases, to induce the authorities to expand the money supply ... to reduce any concomitant unemployment'
>
> (Jay, 1974, p. 35)

At the other extreme is the view that

> 'Fundamentally, ... the right relation between inflation and trade unions ... (is) that inflation strengthens trade unions, not that strong trade unions produce inflation'
>
> (Friedman, 1974, pp 47-48).

This counter-argument which is closely associated with the monetarist viewpoints (Bispham, 1982, p. 10) is supported by Laidler (1974) who argues:

> 'I do not believe that the trade union movement has any power whatsoever to raise the level of money wages in the absence of expansionary monetary policy'

Similarly, Haberler (1966, p. 9) attributes changes in prices to changes in the stock of money. His position is that

> 'there has never been a serious inflation without an increase in the quantity of money. No wage push in the world can produce inflation, if the monetary authorities stand firm and refuse to create money; but the wage push can produce unemployment'.

This quotation is, of course, reminiscent of that of Meiselman already encountered.

Individuals who support wage inflation argue that the government would not allow unemployment to prevail because of the commitment

to full employment. Money supply would therefore have to be increased to prevent unemployment, and inflation results. Although some writers who hold what Bispham (1982, p. 8) has termed 'eclectic' or 'newspaper reader's review' have argued that it becomes a matter of semantics whether the resulting inflation is due to the increased money supply or to the fact that the trade unions have compelled the authorities to increase the stock of money (Jay, 1974, p.) to a certain extent the debate corresponds to the traditional views of demand - pull and cost - push theories of inflation. More formally, the wage theory implies the existence of a stable long-run (even if augmented) Phillips curve while the opposing view denies its existence or that it is vertical (c.f. Friedman, 1968 and Phelps, 1968). There is thus in the longrun no trade-off between inflation and unemployment as suggested by the Phillips curve analysis. This is because there exists a rate of unemployment at which the rate of inflation is constant : if unemployment is below this rate, the rate of inflation accelerates; if above it decelerates. However, left on its own, the economy tends to come back to this rate. This is the rate that Friedman called the natural rate of unemployment but which is now more popularly called the non-accelerating inflation rate of unemployment.

In sum, both proponents and opponents of wage inflation are agreed on the existence of an expectations augmented Phillips curve in the shortrun (except the 'new classical economists') but disagree on the existence of a longrun trade-off between inflation and unemployment. Monetarists or people whose views on the working of the economy are closely related to those of Friedman

are against activist policy such as incomes and prices policies and this is the level at which this controversy is relevant for the present purpose. His reason is that the timing of intervention is likely to be wrong and would therefore be destabilizing. As seen in Ch. 2, one tenet of monetarism is that the private sector is inherently stable i.e. except prevented by some misjudged government intervention, it tends to move back to a position of equilibrium if disturbed. Friedman believes that interventions in such forms as prices and incomes policy only serves to make the economy more imperfect than it was before the introduction of the policy. What is needed, in his view, is the removal of existing imperfections in the labour market. These views are of course in direct contrast to those who subscribe to the existence of a longrun trade off between inflation and unemployment which makes incomes and prices policy a sensible course of action (Minfird, 1976). There is thus the need to make a choice between these competing theories since they have different policy prescriptions (monetary and wage policy). Formal testing of the theories here is completely ruled out as the necessary information (e.g. the wage and unemployment measures) is not available. Furthermore, to test them would require a model and the specification of the model itself is influenced by one's views of the economy which are invariably closely related to one or the other of the theories. Model selection is therefore often biased in favour of one or the other (c.f. Ando and Modigliani (1965)) with Andersen and Jordan (1968) and see Desai (1981, Ch. 3)). Also, it should be clear from chs. 2 and 3 that the relevance of such concepts as full employment and the natural rate of unemployment to Nigeria is doubtful. Nigeria,

however, is not alone in this situation because

> 'In all less developed countries employment in the "modern" sector represents a small, but privileged, proportion of the total labour force, strengthened as it usually is by strong trade unions and government legislation (minimum wage legislation, etc.) The great mass of labour is engaged in small-scale, self-employed, low-productivity activities in the "traditional" sectors of the economy (both rural and urban) and may be idle or underutilized for lengthy periods of time. (This phenomenon which has been termed) disguised unemployment or underemployment in less developed countries refers to the mass of the labour force that is permanently engaged in low productivity activities'
>
> (Kirkpatrick and Nixson, 1976, p. 129)

Mainstream inflation theory as developed in the economic and institutional setting of Western, industrialized economies is thus not directly applicable wholesale to the fragmented and disintegrated economies of less developed countries. This is, however, not a new finding; in the early 1960's Seers (1963) had drawn attention to the 'limitations of the special case' while more recently Streeten (1972 p. 127) has argued against

> 'the simple transfer of fairly sophisticated concepts from one setting to another without close scutiny of the institutional differences'.

As a result, it is necessary to search for a theory of inflation which takes the unique features of less developed countries into consideration. One such theory is the Latin American model of inflation. But again, as Seers would have said, the 'special case' is subject to some limitations. Developing countries are not homogenous and this is easily illustrated with reference to the development literature. The Lewis-Fei-Ranis model of economic development for developing countries was developed specifically

for countries in South-East Asia and therefore assumed an unlimited supply of labour (Lewis, 1954; Fei and Ranis, 1961) which is characteristic of these countries. But as Helleiner (1965) has argued, a more appropriate assumption in respect of African countries is an unlimited supply of land. The Latin American model of inflation thus requires a similar modification before it can be applied to any particular country outside the Western Hemisphere. But first it is necessary to give an outline of the models.

3.2 'STRUCTURAL' VERSUS 'MONETARY' INFLATION

The debate arose from an attempt at explaining the persistently high rates of inflation experienced by many Latin American countries. There are two lines of argument which have been termed 'structuralist' and 'monetarist' respectively (Campos, 1967, p. 108).

In the structuralist view, the structure of the economy is such that it generates certain disequilibria such as inflation, unemployment, balance of payments difficulty, deficit in the public sector budgets, and stagnation in certain sectors. Sunkel, a leading exponent of the structuralist view, identifies the inelastic supply of foodstuffs, the foreign exchange bottleneck and financial constraint as the main structural constraints giving rise to inflation (Sunkel, 1960). With respect to the first constraint, it is argued that the rapid rise in the demand for food arising from urbanization and rising incomes cannot be met because of the sluggish response of the agricultural sector which operates close to the subsistence level. Foreign exchange constitutes a

bottleneck because rising income together with accelerated development efforts as found in most less developed countries leads to a rapid rise in the demand for imports. By contrast, total foreign exchange earnings grow, if at all, at a very slow rate so that a structurally-induced balance of payments disequilibrium develops. As for the financial constraint argument which is not supported by all structuralist writers, it is believed that a rapid rate of urbanization and growth of other aspects of social development enlarges the sphere of government activity. But revenue does not expand at the required rate because of, inter alia, an inelastic tax system. Moreover, private capital formation takes place at an equally slow pace. Yet, basic infrastructure is necessary for the desired rapid development. The government therefore resorts to deficit financing. Basically, the existence of the public budget deficit financed by the banking system is seen to represent the inability of the government to resolve the problem of the distribution of real resources between the public and private sectors. The interaction of the three constraints produces strong inflationary pressures. The resulting increase in the money supply is the factor which makes inflation manifest itself.

The 'monetarists' (their own brand of monetarism is not the same as that propounded by, say, Milton Friedman) deny that the factors outlined above are the causes of the chronic inflation in L. American countries. For instance, the alleged structural inelasticity of the food supply is explained away as the result of the policy of administrative control of food prices (which in fact is used by the government to subsidize the urban consumer

so as to avoid a wage-price spiral). Producers, therefore, are not given the incentive to produce more. The foreign exchange constraint is explained in terms of inappropriate policies such as the overvaluation of currency and an 'inward-looking' development strategy which fails to stimulate the traditional sector.

Inflation, they argue, is a pure case of excess demand. "This is the basic framework for the inflation process', write Bernstein and Patel, 'when aggregate demand for all purpose - consumption, investment and government - exceeds the supply of goods at constant prices (Bernstein and Patel, 1952, p. 368). Continuing in a later article, Bernstein writes:

> 'Although the basic causes of inflation vary widely in different countries, and at different times, the process of inflation always shows strikingly similar characteristics. Eventually, it is caused by the excessive expectations of government, business, or labour in the use of the national product and is associated with the excessive creation of credit'
>
> (Bernstein, 1958, p. 323)

Harberger (1963) in an empirical study of inflation in Chile found a high correlation between the rates of inflation and of monetary expansion. Most of the empirical tests he performed tended to support the monetarist proposition. Nine years later, his conclusion was confirmed in another empirical study (of Brazil) by Kahil (1973, p. 327).

However, another study (for Chile, Argentina, Peru and Uruguay) concluded in favour of the structuralist propositions (Edel, 1969).

On the basis of these studies one cannot reject one or the other

of these hypotheses. It seems that the result of any test would depend on the country concerned. In the following paragraphs, the relevance of this model is considered by examining some aspects of the controversy.

4. INFLATION IN NIGERIA : STRUCTURAL OR MONETARY?

A disadvantage of the monetary analysis of inflation is the preoccupation with the demand for output to the neglect of its supply. This is the aspect that has been stressed by the structural theory reviewed above. One of the arguments of the Latin American monetarists against the proposition of the inelasticity of food supply advanced by the structuralists is that food prices are administered in Chile, thus preventing the market from functioning efficiently as producers are not given the necessary motivation. The implication must be that if all controls were removed there would be no shortage of supply. For Nigeria this argument is not sustainable. Although the prices of certain agricultural commodities (i.e. cocoa, beniseed, coffee, tea, palm produce, cotton, beans, rice, maize, millet, rubber, soya beans, sheanut, ginger and groundnuts, wheat, guinea corn and kenaf) are fixed officially and are always considerably below those prevailing in the free market, such prices are not binding. Producers have the option of selling their output to official agencies at the fixed prices or to the public at the market prices. This probably accounts for the fact that the only commodities now purchased by the marketing boards in significant quantities are cocoa and palm kernel which do not have a firm domestic market (and therefore cannot contribute to the inflationary situation.

In spite of this, foodstuffs are in short supply and the rising ratio of food import to the total import bill is indicative of this. This aspect of the structuralist viewpoint therefore appears to be consistent with the facts in Nigeria. There are many reasons for the inelasticity of the supply of foodstuffs (e.g. low agricultural productivity, rural-urban drift which reduces the size of the agricultural labour force) and the absence of economic incentive is not one of them.

From the discussion in Chs. 2 and 4, there is some evidence of the existence of the financial and balance of payments constraint although both were temporarily removed in the early to middle 1970's. It was seen that financing the expanding budget deficit through the banking system is now a characteristic feature of Nigerian central government finance. Although some countries which cannot be said to be facing a financial constraint also finance their deficits in this manner the proportion of the deficit financed by the financial system and the length of period over which such financing takes place in Nigeria suggests the presence of a financial constraint in the country. The balance of payments constraint will be obvious from the next chapter.

It is clear then that structural rigidities exist in Niberia. But it is doubtful if they, by themselves, can explain the inflationary process. Section 1 of this chapter has already indicated the possible role of the money stock in the inflation phenomenon in Nigeria. A suitable model should therefore take into consideration the importance of both real and financial variables. This is done in a simple model that is discussed

below. But first it is necessary to present the government's views of inflation in the country and the steps taken to bring it under control.

5. INFLATION POLICY IN NIGERIA

5.1 OFFICIAL VIEWS ON INFLATION

There is evidence of a divergence in the official perception of inflation in Nigeria. On the one hand, there is the danger of the potentially inflationary consequences of government fiscal operations which the Central Bank has emphasized since 1964 as seen in the last chapter. To the Bank, inflation is a monetary phenomenon which is fuelled by excessive expansion of government expenditure, particularly if deficit financing is sizeable. The cure then lies in pruning down government expenditure which will ultimately reduce the rate of monetary expansion. It may be pointed out at this point that research in the Bank (to be discussed further below) indicates that the rate of inflation is closely related to the rate of domestic monetary expension and that causation runs from money to prices. Specifically, Nwade (1977, p. 10) has concluded that 'every ₦100 m increase in M_1 added 6.3 percentage points to the price index' during the period 1973 - 77. The direction of causality, of course, is not inconsistent with the findings of the more formal analysis in the first part of this chapter.

On the other hand, the government appears to have held the view that the problem of inflation can be solved without reference to the money supply. This seems to be the basis of its anti-inflation policy reviewed below. But, as pointed out in Ch. 1,

the government has pursued not one but many objectives which are not necessarily compatible. Measures that take it nearer to the realization of one may take it further away from another. The decision on how much of one objective to sacrifice in order to achieve a given level of another is a normative one but it will be possible to state that appropriate policies to realize a particular objective have not been taken. All it then means is that the objective in question is not valued as much as another which requires the policies that have been taken or that the government does not know or is not willing to take the appropriate policies. It is on this premise that the review of the policies is undertaken.

5.2 THE POLICIES

In the discussion of fiscal and monetary policy, reference was made to measures which were supposed to influence the rate of inflation. One such measure was the attempt by the Central Bank to reduce the rate of growth of the money supply. But it was shown in the last chapter that the Bank's effort was vitiated by the financial behaviour of the government. Therefore, the monetary measures are not considered further here. Similarly, the operations of the price control board (discussed in Ch. 1) are ignored here.

The remaining measures may be divided into direct fiscal and incomes policy. The former are treated first.

5.2.1 DIRECT FISCAL MEASURES

One of the arguments used by Fisher (1952) to conclude against

the establishment of a Central Bank in Nigeria is the inflationary potential of such a bank in a highly underdeveloped market economy. Although Fisher's report was given a cold reception in the country, various governments have kept the warning in mind. Thus, in the various budget speeches there are references to the need to maintain price stability. The 1960's was, as elsewhere, in most parts of the world, a period of relative stability. It is therefore not possible to identify clearly anti-inflationary measures before the end of the war in Jan. 1970. The end of the war brought the problem of inflation into sharp focus. During the war itself, efforts were made to rationalize non-essential expenditures with the savings going into the war effort. Actual war took place in the traditionally food-deficit region. As a result, surpluses accumulated in the area outside that region while there were attempts at self-sufficiency in the war-affected region. Given the heavy weight attached to food in the calculation of the CPI already noted, a decline in the price level was recorded in 1967 and 1968. The end of the conflict saw the removal of restrictions on the movement of people and goods. The CPI thus rose by 10% and 13.8% in 1969 and 1970 respectively (the war ended gradually, not suddenly). This necessitated the institution of measures to curb inflation. On reviewing these measures, the Anti-Inflation Task Force set up by the government in August 1975 and which submitted its first report in October of the same year found that the

> 'Government relied in the main on : reductions in import and excise duties; the introduction of price control and bulk purchase arrangements; income tax concessions to businesses, and direct investments and capital grants to states for investment in directly productive activities, particularly those in the

agricultural sector'

(Inflation Task Force, 1975, p. 28).

What emerges from this list is that the government regards inflation as a real phenomenon. Furthermore, some of these measures are likely to conflict with other objectives (e.g. reductions in import duties and the balance of payments - see next chapter). Price control has already been examined in Ch. 4 where it was concluded that it was unlikely to make significant contributions to the solution of the problem of inflation. Business income tax concessions are discussed in the next, although in a somewhat different context. At the risk of prematurely letting the cat out of the bag, it may be stated here that the effectiveness of the scheme, according to many studies based on both the Nigerian situation and the experience of other countries, is highly doubtful. Direct investments and capital grants to states to invest in agriculture are clearly long-term policies. However the success of the measures has not yet been demonstrated : the public sector in Nigeria is not noted for its agricultural output.

One is then left with changes in import and excise duties as the only direct fiscal measure worthy of further consideration here.

One of the measures designed in 1970 to reduce the upward pressure in the domestic price level was

> 'a general reduction of tariffs on imports connected with agriculture, reconstruction and road development, drugs, iron and steel, wrought iron billets, cement, machinery and plants'

(CBN Report 1970, p. 11)

The policy of tariff reduction was to be an important anti-inflation measure in subsequent years. In 1972, for example, 'import duties on a large number of items were reduced substantially' as 'anti-inflationary measures' (CBN, Report, 1972, pp. 11 - 12). Then, in his 'Press Statement on the 1975 - 76 Budget' the Federal Commissioner (i.e. Minister) Of Finance announced 'the review of the level of the Customs and Excise Duties' (p. XXV) with the aim of bringing inflation under control. But from 1978, as a result of the deterioration in the balance of payments, the policy of downward revisions of import and excise duties was reversed : in that year several items were placed under licence (e.g. radio, stereo, and television sets and built-up commercial vehicles) while several others (precious stones, beer and stout, fresh milk among others) were banned outright (CBN, Report, 1978, p. 6).

Whatever the reasoning behind tariff reduction as a measure aimed at reducing the rate of inflation, it is bound to be confronted with problems. Such measures were supposed to act by lowering the supply prices of the affected commodities. Those responsible for designing the measures, however, failed to realize that in the final analysis the price of a commodity is not determined by its cost of production. The important factors in price determination are the relative forces of demand and supply. Elementary price theory suggests that irrespective of how low the cost of producing a given commodity is, it can still command a high price depending on its supply relative to the demand for it. What is being suggested is that there was no guarantee

that the lower prices resulting from tariff reductions would be passed back to consumers. This seems to be the essence of the argument of the Central Bank when it states:

> 'Perhaps the major factor that prevented some of the Government's anti-inflationary measures from being more successful was the oligopolistic market structure prevailing over a wide segment of the economy. Where largely non-competitive market conditions exist, it would be difficult to expect that consumers in general would benefit much from reductions in customs and excise duties. The reductions in 1974 were substantial and coupled with the appreciation of the external value of the naira, the dampening effect on inflation would have been much larger if the prevailing market conditions were more competitive'
>
> (CBN, Report, 1974, p. 15).

Despite its relative impotence, tariff reduction was used to curb inflation until 1978 as seen above and restored in 1980 (CBN Report, p. 5). But other policies were pursued as well as detailed below.

5.2.2 INCOMES POLICY

The issue of incomes policy was touched on in Ch. 2 . It is discussed in greater detail here with the period since 1970 serving as the review period.

A wage freeze was imposed in 1969 (CBN, Report 1970, p. 12). But inflationary pressures intensified as from that year (see first part of this chapter). The cost of living rose by 14% in the first half of 1970 (Inflation Task Force, 1975, p. 16) and this increased the demand for higher wages. A Wages and Salaries Review Commission was set up by the government in July 1970 to review the existing wages and salaries at all levels in the

public sector. In its first report, the Commission recommended an interim award of 4.8% of salary to workers in the public sector on an annual income of ₦100 or less[5]. In August 1971, the second and final award ranging from 12 to 30% of salary to all categories of public sector employees was made[6].

A similar Commission was set up in September 1972 to carry out a comprehensive review of the salary structure in the public sector. But soon after it started its work, the government froze all wages pending the submission of the Commission's report. According to the Inflation Task Force

> 'This measure was widely interpreted as an indication that the Commission would be recommending a general increase in wages and salaries quite apart from considering the question of grading. This expectation accelerated the pressure on prices and this in turn further reinforced the expectation that the Commission would be making a general award'
>
> (p. 17)

The commission submitted its report to the government in September 1974 but the recommendations were not implemented until January 1975 thus leading to a great deal of speculation. By abolishing the daily - pay scheme and recommending a minimum salary of ₦60 per month, the Commission raised the minimum salary by about 3 1/3 times from ₦18.0833 (CBN, Report 1971, p. 36 gave this as the lowest daily pay recommended by the 1971 Commission). In most cases, however, the salary increases ranged from 8% to more than 100% (Inflation Task Force, 1975, p. 17). The awards were backdated to April 1974 and resulted in the payment of ₦657.3 m of which ₦567.3 m represented the payment of arrears. Initial estimate of the expenditure of the private sector on

salary increases was put at ₦349 m (CBN, Report 1975, p. 21).

A Productivity, Prices and Incomes Board was set up early in 1976 with the task of providing 'guidelines on incomes including wages, salaries, profits, dividends and rents and on the basis of its findings, to harmonize the policies on all increases especially wages and dividends and the level of prices generally' (CBN, Report 1976, p. 7). The recommendations of the Board led to the imposition of a wage restraint effective to the end of March 1977. Distribution of dividends in excess of 30% was disallowed. The wage restraint was relaxed in 1977 when wages and salaries of workers with an annual income of ₦3,000 or less were allowed to rise by up to 7%. The ceiling on the payment of dividends was raised to 40% in fiscal year 1978/79 and to 50% in 1979/80 and then to 60% in 1980. Collective bargaining was restored in 1980 when the minimum wage was raised from ₦720 to ₦1,200 per annum (CBN, Report 1980 p. 8). For the three years 1980 - 82 wages and salaries were not to increase by more than 15% for the low-pay (₦3,000 or less p.a.) and 10% for the high-income groups. The minimum salary was raised to ₦1,500 p.a. in 1981 (CBN, Report 1981, p. 33).

According to the authorities, the incomes policy introduced since 1976 was directed at price stability and income redistribution (CBN, Report 1980 p. 7). The first of these objectives is evidently the most relevant for the present purpose. But having set out the incomes policy of the 1970's one may now enquire into its probable effects on the price level.

A casual observation of the facts in the Nigerian case would seem to suggest that incomes policy has no place in analyzing the inflationary situation.

> 'According to the 1966/67 Labour Force Sample Survey, only 5% of the gainfully employed persons were employees; the other 95% were itinerant or unpaid family workers, with three fourths of them engaged in agriculture'
>
> (IMF, 1975, p. 319)

This shows that the number of people in wage employment constitutes an insignificant proportion of the total labourforce. Wage income then, even if it increased by more than 100%, would not have an appreciable impact on total income and would therefore have only a negligible effect on the price level.

However, there are reasons to suppose that this is not so. This small fraction of the labour force exerts an impact on the price level out of proportion to its relative size. As in other countries at similar stages of economic development, the workers in wage employment represent a privileged segment of the labour market (Kirkpatrick and Nixson, 1976, p. 129). Since their income is usually higher than the national average they exercise a greater than average purchasing power. Moreover, they are also more vocal than their counterparts in traditional employment and can therefore influence the government to a greater extent than their size indicates. Finally, the method of wage settlements in use in Nigeria as outlined above tends to aggravate the pressure on prices.

It will be recalled that the civil war ended in 1970 and that the first salary awards were made in December 1970 and August 1971. The dislocation to the productive capacity of the economy

could not be said to have been repaired completely by then. The wage increases thus accentuated the strain on the economy. A special price survey conducted by the Central Bank covering the period December 1970 to March 1971 showed that the weighted average prices of the commodities covered rose by 14.1% in the first quarter of 1971 compared with the average level in 1970. The CPI rose by 16% in 1971 compared with 13.8 and 10% respectively in 1970 and 1969. However, it is not possible to attribute the acceleration of the rate of inflation to the salary awards alone since other factors were at work. For instance, the abolition of the compulsory saving scheme introduced during the war eased the restraint on consumer spending to some extent.

In 1975 when the second major set of wage awards was settled, the CPI rose by 33.7%. But again the cost of living was influenced by other factors. As seen in Ch. 2 the greatest ever increase in government revenue occurred in 1974. Retained revenue of the Federal Government rose by 181.8% over the level in 1973 but total expenditure rose by only 94%. In 1975 retained revenue increased by only 15.1% but total expenditure rose by 133.4%. By 1975 the expenditure had adjusted fully to the rise in revenue in 1974. The increased expenditure is thus partly responsible for the increases in the CPI. Nevertheless, the salary increases have also a part to play in the acceleration of the inflation rate.

The question that arises is whether or not these wage increases can cause continuing inflation. The official view is that they cannot. Commenting on the 1975 (Udoji) awards, the Comm-

issioner of Finance in his 'Press Statement on the 1975 - 76 Budget' referred to earlier stated:

> 'The immediate reaction of the local markets to the recent increases in wages and salaries and the absolute scarcity of goods in the shops should give way to more stable prices in the longrun. Over the next three to six months, a more realistic adjustment of price levels is expected when the empty shops are replenished but it would be unrealistic not to expect some upward movement in the general level of prices'
>
> (p. xxvi)

It is therefore conceded that the increases can have a shock effect on the price level. The facts are set out below. Taking the years in which the awards were made (1971 and 1975) first, there is evidence of some relationship between salary increases and changes in the CPI. In each of the years, the highest ever increase in the CPI was recorded. In the following years on each occasion the rate of inflation decelerated. Since the 1971 increases were not as significant as those of 1975 one may single out the latter for further examination. Here, the highest increases in the money supply were recorded too. But monetary acceleration started from 1974 (in the case of narrow money the rate of expansion accelerated from 17.8% in 1973 to 45.5% in 1974; corresponding figures for broad money are 20.1% and 47.1%). A second set of forces were therefore in operation. These forces were identified in Ch.4 as the monetization of the oil receipts. It is difficult then, as explained above, to ascribe a major part of the price rise in 1975 to the wage increases. The argument that wage increases cause inflation must rest on the following evidence in the particular case being considered. Each time an award is made, the highest rate of inflation is recorded - 16.1% in 1971, 33.6% in 1975. Within a period of four months of the payment of the

TABLE 5.3 : ANNUAL RATES OF CHANGE OF MONEY AND THE CPI

	MONEY	MONEY & QUASI-MONEY	CONSUMER PRICE INDEX
1970	47.5	43.7	13.7
1	17.3	21.9	16.1
2	8.3	10.5	2.7
3	17.8	20.1	5.7
4	45.5	47.1	12.5
5	84.3	75.3	33.6
6	50.6	48.9	24.3
7	46.7	35.5	19.3
8	14.9	15.1	18.7
9	12.0	18.6	11.1
80	23.0	30.8	11.4
1	20.1	19.8	20.9
2	3.9	8.8	7.5
3	12.8	13.3	20.0

payment of the greatest awards (first four months of 1975), the money supply increased by 46.7% compared with a rise of only 9.2% in the same period a year earlier (CBN, Report 1975, p. 50). In the six months of the same award, the composite consumer price index (the measure of inflation in Nigeria) rose by an average of 4.7 per month compared with the figure of 1.4% in the corresponding period of the previous year (CBN, Report 1975, p. 45). The rate of monetary expansion also attained its highest values in the year of the biggest award (1975). Finally, the wage awards also contributed to the growth of government expenditure

which was identified in the last chapter as the main source of the growth of the money stock. In 1975, current expenditure rose by 93% to ₦1685.9 m. The respective rates of growth a year earlier and later were 35.6% and 28.7%. If the amount spent on the payment of the increase and arrears is excluded, the increase in the current expenditure of the Federal Government would have been substantially less than it was.

The conclusion then is that wage increases on the scale that is typical in Nigeria can have a positive impact on the price level by (i) inducing monetary expansion through increases in government expenditure and (ii) raising the expected rate of inflation. Wage awards affect the formation of inflation expectations through the 'announcement effect'. Often there is a long lag between the announcement of the recommendations of a wage review commission which are invariably implemented and the actual payment of the awards which is generally backdated. This tends to generate expectations that prices are going to rise. Given the generally inelastic supply of output, this expectation tends to be self-fulfilling. However, it is doubtful if salary and wage awards can lead to a self-propelling inflation.

Nevertheless, it makes sense for the authorities to modify their methods of wage settlements. Drastic wage increases, as explained above, tend to exert a shock pressure on the price level which eventually rises. But as in most countries of the world the price level rarely declines and only the rate of acceleration is expected to fall. The increase in prices may lead to distortions in projected expenditures and the overall performance of a development plan, thus adversely affecting other objectives of the

government. (The doubling of the minimum wage in 1975 and 1980 alone is sufficient to lead to some degree of plan distortion). Since 'the lowest wage paid by the Federal Government tends to set the floor on wage rates' (IMF, 1975, p. 319) labour costs are also raised in the private sector. This can cause some problems to private sector employers. For instance, it was reported that

> 'The high incidence of trade disputes in 1975 arose mainly from the reluctance of employers in the private sector to match the salary and wage increases in the public sector following the recommendations of the Public Service Review Commission'
>
> (CBN, Report 1975 p. 45)

This, of course, can adversely affect capacity utilization in the economy, especially when the minimum wage is increased not in small doses but multiplied by a factor of two or more. Employment is also likely to suffer (see Ch. 2 for more details).

6. CONCLUSION : IS INFLATION CONTROLLABLE?

From the discussion of the inflationary phenomenon in Nigeria, the question that arises naturally is this : Can the government control inflation in Nigeria? The discussion so far may be summarised as follows. Inflation in Nigeria is due to many factors but monetary expansion appears to dominate all others. The examination of the inflationary process shows that it is broadly consistent with the monetary slogan coined by M. Friedman quoted in part one of this chapter which may be summarised as

$$p = m - q$$

where p, m and q are the respective rates of change in the price level, the money stock and output. A successful inflation policy should therefore aim at either reducing m or raising q

or both. Most of the anti-inflation fiscal measures of the government, as reviewed here, were clearly aimed at raising q (e.g. the fiscal incentive measures to be discussed in the next chapter and tariff reductions). Such policies are generally ineffective as far as inflation is concerned. Moreover, where they are effective, they cannot raise q appreciably. Finally, changes in the money supply (i.e. m) may dominate any rise in q. Given the difficulty of raising q in the shortrun, the burden of adjustment must be borne by m. Thus the question posed at the beginning of this section reduces to whether or not m can be controlled which was discussed in the last chapter. In turn, this question depends on how successful the government is in controlling its expenditures (a subject matter of Ch. 2). For these reasons, the original question may be answered in the negative unless the government is willing to control its expenditure.

FOOTNOTES : CHAPTER FIVE

1. Quoted by R.C.O. Matthews (1983)

2. The results of an econometric exercise not reported here strongly support the contention made by Adekunle (1970, p. 9) for an earlier period (1950 - 66) that 'the broader the concept of money supply the stronger is the negative trend movement in the velocity'.

3. This proposition is proved in Dorhbusch (1980) for example.

4. There are many modifications of or even alternatives to the Granger test. Some of the better known are the Haugh-Pierce Method which is based on Haugh (1977) and Pierce and Haugh (1977). (This has been used by Aghelvi and Khan (1978)), and Hernández-Iglesias and Hernández-Iglesias (1981).

5. Federal Republic of Nigeria 1970. First Report of the Wages and Salaries Review Commission. Lagos : Federal Ministry of Information.

6. ___ 1971. Second and Final Report of the Wages and Salaries Review Commission. Lagos : Federal Ministry of Information.

CHAPTER SIX

THE BALANCE OF PAYMENTS

INTRODUCTION

The balance of payments has been one of the most important objective variables of the government since 1960. From the balance of payments crisis of 1964, which led to the imposition of a wide range of controls on trade and to the adoption for the first time of an active monetary policy, to the blanket controls on imports and other foreign exchange transactions in 1982, the Federal Government demonstrated the extent of its commitment to achieving a 'healthy' balance of payments position. The main aim of this chapter is to assess how far the government succeeded in achieving this objective.

The discussion is divided into four parts. The first describes the movement of the main measures of balance of payments performance while the second summarizes the measures taken to correct the disequilibrium observed in the first part. Part four contains an appraisal of these measures in the light of the theoretical discussion which is the subject matter of Part three.

1. NIGERIA'S BALANCE OF PAYMENTS

Before giving an account of the main developments in the balance of payments of the country, it is necessary to say a word about the concept of the balance of payments being employed here. This is the official settlements balance which may be contrasted with another concept that was widely used - the basic balance.

The difference between the two is that while, in addition to the current account items, the latter treats long-term capital as autonomous, the former regards the net change in official monetary reserves and the net change in liabilities to foreign official institutions as compensatory items and all others as autonomous or independently-motivated. As far as Nigeria's balance of payments presentation is concerned, the official settlements definition places both the 'errors and omissions' item and commercial bank transactions 'above the line' while the basic balance places them 'below the line'.

Arguing a case for the treatment of the 'errors and omissions' items as autonomous in the case of Nigeria, Osagie (1973) states that

> 'Errors and omissions are the result of unrecorded merchandise and autonomous short-term capital flows. The progressively increasing import tariff rates in the 1950's and 1960's, and the operation of the Exchange Control Act made illegal transactions such as smuggling and secret dealings in foreign debt-instruments rather profitable. In addition, the high incidence of export commodity taxation (export tax, marketing board surpluses) may have induced a number of operators to completely avoid the normal marketing channels by smuggling the produce to neighbouring countries'

If this view is accepted then the basic balance is an inadequate measure of the imbalance in the balance of payments of Nigeria. Moreover, this concept takes a long-run view of the balance of payments as it abstracts from volatile short-term capital movements, thus focusing on the real sector of the economy. It says nothing about the level of foreign reserves (under fixed exchange rates) or the exchange rate (under perfectly flexible exchange rate) as short term capital movement may be sufficient to offset any disequilibrium. But the level

of foreign reserves and the exchange rate are relevant for the present purpose, hence the choice of the official settlements definition.

1.1 TRENDS IN THE BALANCE OF PAYMENTS

In Table 6.1 the balance of payments position of the country, along with major individual accounts, is set out for the years 1960 through 1981. It is clear from the table that the balance of payments was in deficit in all the years between 1960 and 1969 except 1965, 1968 and 1969. Although the deficit persisted for nine years (from 1956 to 1964), and was relatively substantial in some years, the country's balance of payments position was not considered as posing a serious problem until 1964. In that year, the continuous deficits sustained in the previous years resulted in the decumulation of foreign reserves below the minimum level of four months' worth of import set by official policy. It was at this time that measures to stem the drain of foreign reserves were announced (CBN, Report, 1964). That the deficit was turned into a surplus in the following year owed more to the rapid increase in petroleum exports than to the success of the policies. In any event, deficits were recorded in the following two years after which the balance of payments was in surplus until 1975 (except 1972). The table shows that the balance of trade had the greatest impact on the balance of payments in 1974 and 1975. In particular, petroleum exports have exerted a tremendous impact on the balance of payments since 1972 as shown below.

The movement of the official settlements definition of the balance

of payments since 1974 is particularly interesting. In that year, the modest surplus of ₦174.4 m recorded a year earlier jumped to ₦3102 m - a figure that has never been equalled in the country. But the surplus declined to only ₦157.5 m in 1975 and was transformed into a deficit a year later. The deficit increased progressively until 1979 when it was turned into a surplus of nearly ₦2000 m. As before, the balance of payments swung dramatically to a record deficit of ₦2989.6 m in 1981.

A remarkable feature of Nigeria's balance of payments is that a positive net services figure has never been recorded. Moreover, the deficit on the services account has been growing over time. Another notable characteristic of the balance of payments is that, with the exception of comparatively small net outflows of ₦.9 m and ₦50.6 m sustained in 1974 and 1976 respectively, the country has always recorded positive net capital inflows.

As the balance of trade and the services account were in deficit between 1955 and 1964, and as unilateral transfers were small in magnitude, the current account was also in deficit during this period. Even when the trade account recorded surpluses in the mid-1960's, the deficit on the services account exceeded the trade account surplus. As a result, the current account was in deficit until 1972. In 1976, the deficit on the services account more than offset the surplus on the trade account and given negative net unrequited transfers, the current account was in deficit in that year as it was to be in 1978 and 1981.

The discussion so far has been in terms of aggregate balances of specific accounts. A clearer picture emerges if the data are disaggregated into two broad types of transactions, namely, oil and non-oil. The non-oil accounts for 1970 - 81, are presented in Table 6.2. The table demonstrates clearly that the balance of trade, the services and the current accounts have always been in deficit since 1970. Furthermore, the deficit on each account has risen monotonically over the years with the single exception of 1979 in respect of the trade and current accounts. As a proportion of the GDP at current factor cost, the non-oil current account deficit rose from only 7.7% in 1970 to slightly more than a quarter in 1977, reaching a peak of 30% in 1981. The figures for net capital flows do not tell the whole story. These figures are dominated by official long-term borrowing which accounted for ₦881.2 m out of the net inflow of ₦1019.8 m.

When the two tables are compared, it is clear that the source of Nigeria's balance of payments problem is in the non-oil external transactions. When the net capital movement figures and the year 1975 are excluded, the data presented in Table 6.2 do not behave as erratically as those in Table 6.1. This suggests that trade in oil has had a destabilizing effect on Nigeria's balance of payments since 1970 - a proposition that has been investigated formally and confirmed by Karp (1980) with respect to export concentration. An aspect of the instability introduced by oil may be illustrated with reference to the merchandise trade account disaggregated into oil and non-oil (not shown). This shows that oil is the main contributor to export earnings

TABLE 6.1 SUMMARY MEASURES OF THE BALANCE OF PAYMENTS, 1960 - 81

MILLIONS OF NAIRA

	MERCHANDISE TRADE BALANCE	NET SERVICES	NET UNREQUITED TRANSFERS	CURRENT ACCOUNT BALANCE	NET CAPITAL INFLOWS	OFFICIAL SETTLEMENTS BALANCE
960	-88.6	-46.6	-3.4	-138.6	54.2	-76.2
1	-87.4	-28.4	-7.6	-123.4	64	-66
2	-64.2	-39.8	-1.4	-105.4	29.8	-50.2
3	-32.0	-73.6	-5.4	-111	69.2	-57
4	-72.0	-100	-0.4	-182.4	147.6	-17.2
5	-5.0	-179.2	5.4	-178.8	132	10.2
6	60.2	-248.6	4.2	-184.2	96.8	-20.0
7	40.8	-222.2	15.4	-166	122.8	-62.2
8	34.6	-237.2	34.4	-168.2	160	10
9	166.8	-296.2	20.8	-108.6	80.6	11.4
70	173	-268	45	-50	49.2	46.6
1	285	-516.2	1.8	-229.4	293.4	117.4
2	477.5	-785.9	-14.3	-322.7	259.2	-49.8
3	1166.9	-1078.8	-35.4	52.7	59.2	174.4
4	4439.3	-1314.7	-62.1	3062.5	-5.9	3102.2
5	1487.1	-1367.7	-76.8	42.6	141.1	157.5
6	1293.5	-1455	-97.8	-259.3	-50.6	-339.9
7	1553.9	-2082.7	-155.7	528.8	150.4	-527.2
8	-741.9	-1474.6	-170.6	-2386.9	1111.9	-1293.6
9	1967.4	-1724.4	-233.5	1009.5	813.2	1868.9
80	4084.5	-2176.3	-315.2	1593	774.6	2402.6
1	-342.6	-2719.3	-357.5	-3419.4	475	-2989.6

SOURCE: CBN, ECONOMIC AND FINANCIAL REVIEW, VARIOUS ISSUES

TABLE 6.2 : BALANCE OF PAYMENTS (NON-OIL ACCOUNT)

MILLIONS OF NAIRA

	MERCHANDISE TRADE BALANCE	NET SERVICES	NET UNILATERAL TRANSFERS	CURRENT ACCOUNT BALANCE	NET CAPITAL INFLOWS	CURRENT A/C BALANCE AS % OF GDP
1970	-291.8	-186.6	45	-433.6	179.6	7.7
1	-644.8	-187.0	1.8	-830	289.4	11.7
2	-663.7	-257.0	-14.3	-935	73.4	12.1
3	-798.1	-452.6	-35.4	-1286.1	80.3	14.3
4	-1179.0	-753.5	-62.1	-1994.6	-141.7	11.8
5	-3161.2	-788.4	-76.8	-4026.4	19.7	19.7
6	-4533.4	-907.6	-97.8	-5538.8	-8.6	21.8
7	-5797.5	-1199.3	-118.7	-7115.5	2.9	25.4
8	-6636.6	-1229.5	-170.6	-8036.7	1019.8	28.0
9	-6239.4	-1508.4	-230.6	-7978.4	817.6	20.0
80	-7920.9	-1853.8	-310.0	-10094.7	804.6	23.3
1	-10559.0	-2208.5	-349.7	-13117.2	568.7	30.2

SOURCE: CBN, ANNUAL REPORT FOR VARIOUS YEARS

while its role on the import side is negligible. Increases in export earnings tend to lead increases in import by a year. However, the relationship between the growth of exports and imports appears to be asymmetrical : while increases in exports tend to lead to increases in imports, imports tend to be sticky downward. This 'ratchet effect' may be responsible for the erratic movement of the current account balance observed in Table 6.1, especially since 1973. The probable effect of export

on import is further investigated in Section 3.

2. BALANCE OF PAYMENTS POLICY

Having described the main trends in the balance of payments to 1981, the next task that is undertaken is a review of the balance of payments policy pursued by the Government. The measures taken may be divided into two broad groups : macro- and micro-economic. The former have been discussed in Chapters 2 and 4 under fiscal and monetary policy respectively. The monetary policy measures consisted essentially of reducing the growth of domestic credit and the method through which this was sought - credit guidelines and interest rates - was discussed in detail in Ch. 4. In addition to monetary and fiscal policy, the authorities made use of the exchange rate tool explicitly and by default. A discussion of this issue is deferred to a later section. Also, direct controls were imposed on foreign exchange transactions. These are discussed along with the micro-economic policy measures which are taken up presently.

2.1 FISCAL AND MONETARY POLICY

Owing to the relative ineffectiveness of monetary policy noted in Ch. 4, the Government relied heavily on fiscal policy. But even then it was reluctant or unable to use the expenditure side of its budget to achieve its balance of payments objective (see Ch. 2). Consequently, the burden of adjustment was borne largely by the revenue side. This also helps to explain the pre-eminance of microeconomic measures among the balance of payments measures.

As total external reserves fell below what was regarded as prudent in 1964, measures were taken to halt its drain. The Central Bank issued its first credit guidelines although, as already stated, the emphasis was on direct controls. Earlier, in August 1963, restrictions had been placed on imports from specific countries, notably Japan with which the country had sustained the largest deficit. While extending these controls to Japanese goods shipped from Hong Kong, the import duties on certain items were increased in March 1964 and, in August, the indirect taxes on a wide range of imported goods were increased (CBN, Report, 1964, p. 14). Further restrictive measures were taken in 1965. On 24 August the government announced a number of measures which included '(i) the imposition of higher customs tariffs ranging from 33 1/3% to 150% ad valorem ... (ii) ban on all categories of imports from Japan, except textile, and (iii) restoration of restriction of imports from Hong Kong' (CBN, Report, 1965, p. 11). The Central Bank also maintained its restriction on commercial bank credit. But as the balance of payments improved that year and as it was thought that the economy was heading towards a recession, these controls were relaxed in 1966.

However, following the outbreak of war in 1967 and the sterling devaluation of that year, measures to restrain the growth of imports were taken. Specific import licensing was introduced against the Dollar Area, Japan, Hong Kong, the Netherlands, Eastern Europe and China as well as against a long list of commodities, notably cement, meat and petroleum products. Furthermore, tariff rates were substantially increased on an even

longer list of items while the range of banned imported items was extended. Later, in 1968, a range of 45 items were removed from the Open General Import Licence and put under the special licence system. In 1969, further duty increases were introduced under the Customs Tariff (Duties and Exemptions) Order No. 2 of 1969. However, duties on some goods, especially those of an intermediate nature were reduced (Nigeria, 1970, pp. 17 - 20).

Thus by the end of the civil war in January 1970, the economy was operating with a set of stringent controls on transactions involving the use of foreign exchange. Yet, the external payments position pointed to the need to conserve foreign exchange at the official exchange rates. The Government therefore imposed additional taxes on what it thought to be luxury items in great demand, granted exemptions to exporters of manufactured goods in respect of value or volume at a defined level, and relaxed the controls on the repatriation of dividends, profits and management fees with a view to attracting foreign capital (CBN, Report, 1970, p. 13).

Further controls were instituted in 1971. This involved the reduction of foreign exchange outflow in the form of travel allowance, remittance of salaries, dividends and profits due to non-residents. Finally, the authorities decided to introduce the use of a foreign exchange budget in that year (CBN, Report, 1971, p. 12).

In 1972 some of the measures in existence were retained while other controls were relaxed : the limit on remittance of monthly

salaries was restored to its pre-1971 level subject to a new higher maximum, the travel allowance was also restored to the level at the end of 1970 while remittance of arrears of profits and dividends was permitted.

From 1973, there was no new policy aimed at conserving foreign exchange reserves and, indeed, opposite policies were pursued : duties on many items were reduced while the controls on foreign exchange outflow were relaxed. For instance, the travel allowance which stood at ₦150 per adult in 1971 was progressively revised upward to ₦1000 in 1977. But in the latter year, the problem of external imbalance assumed a greater dimension. Consequently, duties on a wide range of items were raised. The duties on some were as much as 100% (e.g. outer garments) while import licensing which was abolished earlier was reintroduced for some items while others were banned.

In 1978, further controls on foreign exchange were instituted, including the Comprehensive Import Supervision scheme which involved the pre-shipment inspection of imports to control the rate, quality, quantity and quoted prices of imported goods. By 1980 the authorities were able to report that

> ' In designing fiscal measures for 1980, the Federal Government took cognizance of the fact that the import restrictions of the preceding fiscal years had largely fulfilled their aim of improving the balance of payments by the end of 1979'
>
> CBN, 1980, p. 5

In accordance with this conviction, tariffs were revised downwards and even eliminated in certain cases (such as paper bags, spare parts for the cement industry and some raw materials).

Other foreign exchange controls were relaxed, mainly in the areas of consultancy fees, royalties, repatriation of salaries and of the proceeds from the sale of shares under the indigenization programme.

Again, as explained earlier, the balance of payments deteriorated sharply in 1981 and existing controls were retained for that year.

2.2 EXCHANGE RATE POLICY

When the country joined the IMF in March 1961 its currency was pegged at par to the pound sterling and the declared par value of the Nigerian pound (£N) was US$2.80. On 17 April 1963 an initial par value of 2.48828 grammes of fine gold per £N was established. The Central Bank quoted rates at which it was prepared to deal in sterling and US dollars with authorized dealers and the public. But such dealings were for approved transactions subject to a minimum of £10,000 (sterling) and were on a spot basis only. It determined the dealing rates for sterling periodically while the rates for the U.S. dollar were based on the £N/£ sterling cross rates.

There was no major change to the exchange rate system until November 1967 when sterling was devalued. The £N appreciated in terms of the pound sterling since Nigeria took no action. Prior to the suspension of dollar-gold convertibility on 15 August 1971, the buying and selling rates were 1.1681 and 1.1620 pounds sterling per £N. From 23 August a complicated exchange

rate system was established. (CBN Report, 1971, p. 13). But following the currency realignment and the devaluation of the US$ by 8.57% against gold in December that year, Nigeria reverted to the pre-15th August gold parity of its currency. This meant that the £N appreciated against the US$ from £N1 = $2.80 to £N1 = $3.04. The £N was then tied to the US$.

The present currency, the naira (₦), was introduced in January 1973 with a value of £N1 = ₦2. The external value of the currency was not affected apart from the change of units. The naira was devalued by 10% on 14 February 1973 which was the full extent of the US$ devaluation two days earlier. A central rate of 1.11973 g of fine gold per naira corresponding at the time to ₦0.793648 = SDR1 or ₦0.657893 = US$ was then established. The dollar became the intervention currency and the Central Bank's rates for the $ were set at 0.50% either side of parity, with those of sterling being determined on the basis of sterling-dollar rates quoted in London.

From 1 April 1974 the Bank stopped observing any specified ceilings on rates for SDR, gold and US$:

> 'From April, the monetary authorities adopted the policy of progressively appreciating the external value of the naira. There was no reason for continuing to hold the fluctuation of the naira exchange rate within the specified margin of 2¼% on either side of the central rate. Adherence to the central rate had led to undesirable results in the past. For example, movements of the naira exchange rate had depended solely on the behaviour of the US$ on the foreign exchange markets, despite the divergent strengths of the naira and the US$ as evidenced by the respective balance of payments performances of Nigeria and the United States'
>
> (CBN, Report, 1974, pp. 13 - 14)

Since then Nigeria has followed an independent exchange rate policy. The middle rate of the intervention currency (US$) is now

> 'determined through an import-weighted basket of currencies taking into consideration the country's balance of payments and reserve positions as well as chance factors which caused erratic movements in some of the major currencies'
>
> (Ozumba, 1978, p. 5)

This policy gives the Central Bank much discretion in determining the external value of the currency. The only truly objective factor is the weight of the currencies which is based on the average shares of the issuing countries in Nigeria's import trade. The resulting exchange rates against the dollar and SDR are presented in appendix table 6.3 both on an end-of-year and annual-average basis.

It must be pointed out that virtually all imports were subject to 'national reconstruction surcharge' until 1974. The rate was raised from 5 to 7½% in 1968 and reduced to 5% in 1970. It was finally abolished on 1 April 1974. However, all non-government foreign exchange transactions attach a commission of ¼%. To the people affected, this has the effect of reducing the external value of the currency.

From this review, it is clear that most of the measures were directed at restraining the growth of imports. Now the success of such measures (and the tariff policy discussed below) depends to a large extent on the behaviour of the import demand function. Moreover, this function has some implications for the effective-

ness of policies directed at other objectives. For instance, a high marginal propensity to import has the effect of reducing the expenditure multiplier and hence the impact of a given increase in government expenditure. Consequently, the next section is devoted to an empirical analysis of the import demand function.

3. THE DEMAND FOR IMPORTS IN NIGERIA : A QUANTITATIVE ANALYSIS

In the 1960's, imports grew very slowly, rising from ₦432 m in 1960 to only ₦497 m in 1969. The 1970's, however, witnessed a number of changes. Imports rose more than two-fold between 1969 and 1971 and again between 1974 and 1975, reaching a peak of ₦12,013 m in 1981.

Output grew faster than imports between 1962 and 1974. As a proportion of the GDP, imports (both in nominal terms) declined from 0.18 in 1960 to 0.10 in 1974. But the ratio rose as from 1975 and stood at 0.297 by 1981, averaging 0.172 over the entire review period.

There is evidence of a close statistical relationship between imports and exports. Moreover, there is a tendency for exports to lead imports by a year. The simple correlation coefficient between the logarithms of the contemporaneous values of the two variables is 0.967 and for lagged exports it is 0.987. This correlation is illustrated graphically in Chart 6.1.

3.1 SPECIFICATION OF THE IMPORT DEMAND FUNCTION

The conventional import demand function relates the quantity of import demanded, Z, to the level of the demand for goods and services, Y, and relative prices, Pr. The total demand variable is often proxied by the national income while relative prices is often expressed as the ratio of import prices to the domestic price level (e.g. Kubursi, 1974; Aghelvi, 1977). However, national income is an imperfect proxy for total demand because of the definition of the former which includes exports but excludes imports. Total demand is given by private and public expenditure on imported and home produced goods and services and should therefore include imports but exclude exports. The imperfection is further increased by the problems of valuing output (Ch. 1; Appendix 1). To minimize this problem, the sum of private and public expenditures has been used to proxy total demand in the following exercise except as indicated. The validity of the results to be obtained is therefore subject to the overall limitations of this measure of aggregate demand in terms of suitability and errors of measurement.

The import demand function is therefore given by:

$$Z_t = f(Y_t, P_{rt}, U_t) \qquad (1)$$

where all variables are measured in the domestic currency and it is expected that $f_1 > 0$, $f_2 < 0$.

Another factor that might affect the demand for imports in a country like Nigeria is the level of foreign reserves. The notion that foreign exchange receipts are a possible argument

in the import demand function is implicit in some models of world trade and economic development (e.g. Chenery and Strout, 1966; Maizels, 1968). Furthermore,

> 'In order to account for the role of quantitative restrictions, most studies have included measures such as the level of international reserves, of export receipts, and overseas assets in the import equation. The assumption behind the use of these alternative measures is that the authorities vary restrictions inversely with the country's capacity to import, and this capacity can be measured by one of these proxies'
>
> (Khan, 1974, pp. 682 - 83).

In Nigeria, as part of its measures designed to conserve foreign exchange the government decided in 1971 to make 'explicit use of a foreign exchange budget to guide officials handling various applications' (CBN, Report, 1971, p. 12). This statement implies that even before then, the decision on how much to import had been influenced by the availability of foreign exchange. It also implies that the relevant reserve measure is the level at the beginning of the current period, i.e. the level at the end of the previous period. The reserve variable may replace or supplement Y in eqn (1).

Finally, there is the possibility that the demand for imports adjusts to a 'desired' or equilibrium level and that adjustment may not be complete in a single period. The familiar stock adjustment technique introduced in Ch.2 may then be used to eliminate the unobservable 'desired' quantity.

These considerations give six estimating equations[1]:

$$\log Z_t = a_{10} + a_{11} \log Y_t + a_{12} \log P_{rt} + U_{1t} \quad (2)$$

$$\log Z_t = a_{10} + a_{21} \log Y_t + a_{22} \log F_{t-1} + U_{2t} \quad (3)$$

$$\log Z_t = a_{30} + a_{31} \log Y_t + a_{32} \log P_{rt} + a_{33} \log F_{t-1} + U_{3t} \quad (4)$$

$$\log Z_t = b_{10} + b_{11} \log Y_t + b_{12} \log P_{rt} + c \log Z_{t-1} + V_{1t} \quad (5)$$

$$\log Z_t = b_{20} + b_{21} \log Y_t + b_{22} \log F_{t-1} + c \log Z_{t-1} + V_{2t} \quad (6)$$

$$\log Z_t = b_{30} + b_{31} \log Y_t + b_{32} \log P_{rt} + b_{33} \log F_{t-1} + c \log Z_{t-1} + V_{3t} \quad (7)$$

where $b_{ij} = a_{ij}$, $i, j = 0, \ldots, 3$ $\quad c = 1 - \lambda$;
$V_i = \lambda U_i$; F_{t-1} = level of reserves in the previous period;
and λ is the coefficient of adjustment s.t. $\quad 0 < \lambda \leq 1$.

3.2 ESTIMATION AND RESULTS

Equation 2 - 7 were estimated in nominal and in real terms. In the latter case, real import is defined as nominal imports deflated by the import price index while real income is the value of total domestic expenditure deflated by the consumer price index. The sample period runs from 1959 to 1981 but lagging may lead to some loss of degrees of freedom. All data are annual.

It is clear from the results presented in Table 6.3 that the coefficients of the income and foreign reserve variables have the expected signs and are statistically significant at the 5% level. The coefficient of the price variable is also correctly signed in each equation but it is not statistically different from zero in equations 1, 4, 10 and 12 even at the 10% level. The adjusted $\bar{R}^2$ which ranged from 0.924 (equation 7) to 0.994 (equation 3) is reasonably high. The null hypothesis that all the

regression coefficients are zero cannot be accepted for any equation as the critical values of the F distribution at 1% significance are F(2, 19) = 5.93 and F(4,16) = 4.77 and all the valculated F- statistics are above 115.

However, there is great variation in respect of the Durbin-Watson statistic. The equations to which the D-W statistic is directly applicable are 1, 2, 3, 7, 8 and 9. Of these 1 and 7 display clear evidence of positive serial correlation while, at the 5% level, the null hypothesis of zero autocorrelation is barely acceptable for 2. But the null hypothesis cannot be rejected in the case of 3, 8 and 9.

The remaining equations (4, 6, 10, 12) contain the lagged values of the dependent variable, hence the D-W is inapplicable. In such situations, it is Durbin's h test (introduced in Ch. 2) which is more appropriate for detecting the presence of serial correlation. The value of this statistic is presented for eqns. 18 and 24 only since the coefficient of the lagged endogenous variable in the other equations is not statistically different from zero:

Eqn 18 : h = 0.847

24 : h = 1.685

The critical value of the normal distribution at the 5% level is 1.645. Therefore, the null hypothesis of no serial correlation is accepted in the case of Eqn 18 but rejected in Eqn. 24.

TABLE 6.3 : AGGREGATE DEMAND FOR IMPORTS : LEVELS

NOMINAL

	CONSTANT	INCOME	RELATIVE PRICES	FOREIGN RESERVES	LAGGED DEPEND VARIABLES	$\bar{R}^2$	D-W	F- STAT
1	-2.19 (2.4)	1.0775 (14.4)	-0.3993 (1.2)			0.983	1.1009	585
2	-2.24 (6.9)	0.93 (15.7)		0.18 (4.3)		0.99	1.58	1109
3	-0.627 (1.012)	0.784 (11.68)	-0.553 (2.76)	0.200 5.972)		0.9936	1.964	1094
4	-2.07 (2.45)	0.83 (5.95)	-0.18 (0.57)		0.276 (2.05)	0.9857	1.71	460
5	-1.93 (5.45)	0.77 (7.34)		0.155 (3.73)	0.177 (1.76)	0.992	1.98	827
6	-0.743 (1.15)	0.733 (7.5)	-0.478 (2.12)	0.179 (4.5)	0.0900 (0.896)	0.993	2.19	749

REAL

7	-1.63 (1.7)	1.057 (7.5)	-0.62 (2.5)			0.924	1.004	123
8	-1.48 (3.3)	0.72 (6.6)		0.20 (6.5)		0.970	1.8	319
9	-0.62 (1.09)	0.64 (5.97)	-0.33 (2.2)	0.18 (6.1)		0.975	2.15	260
10	-1.75 (2.17)	0.75 (4.6)	-0.22 (0.875)		0.41 (2.8)	0.945	1.9	115
11	-1.42 (3.2)	0.65 (5.3)		0.167 (4.0)	0.15 (1.2)	0.970	2.05	218
12	-0.66 (1.08)	0.625 (5.4)	-0.308 (1.7)	0.174 (4.4)	0,033 (0,24)	0.973	2.19	184

An examination of the static equations in which the D-W statistic suggests the presence of first-order serial correlation (1 and 7) shows that they have one thing in common : the relative price variable is the only explanatory variable in addition to income. Similarly, the other equations with no evidence of a first-order correlation (2, 3, 8 and 9) each contains the level of reserves as an explanatory variable, whether the variable is used in place of or in conjunction with relative prices.

In terms of model selection, only those equations which are free from autocorrelation (2, 3, 4, 8 and 23) need be considered. This decision is based on the results by Granger and Newbold that

> 'From our own studies we would conclude that if a regression equation relating economic variables is found to have strongly autocorrelated residuals, equivalent to a low Durbin-Watson value, the only conclusion that can be reached is that the equation is misspecified, whatever the value of $\bar{R}^2$ observed'
>
> Granger and Newbold, 1974, p. 117

Of these equations,(2) may be dropped on the ground that its D-W value is very close to the critical point of indeterminacy (between d_l and d_u). If the test statistics shown are used to discriminate among the remaining equations, (3) would be the winner : it has the highest $\bar{R}^2$ and F- statistics and its D-W value is closest to the ideal figure of 2.0. The preferred import demand function is therefore given by equation 4.

The coefficient of the lagged dependent variable is not statistically different from zero in most of the equations. This suggests the absence of a significant adjustment lag. This is not entirely unexpected since the data used are annual. All adjust-

ments therefore appear to be accomplished within a year or so. Ajayi (1975) p. 173 who obtained a similar result has suggested the 'absence of habit persistence' as a possible explanation. The existence of such a phenomenon is not incompatible with the results above or those he obtained because lag in adjustment may persist over quarters, rather than years. A shorter-run model is needed to validate the suggestion.

In order to take account of the effect of the civil war, a dummy variable with value 1 in the war years (1967 - 69) and zero otherwise was included in equation 4. The coefficient of the variable was -0.09 with a t value of 0.65. The results show that the war had a negative but insignificant impact on the demand for imports. Equation 4 therefore stands as the preferred import demand equation.

From the estimates of this equation presented in 3, in Table 6.3, one can say that the income elasticity of the demand for imports is below unity. This observation is contradicted only by results contained in eqns 1 and 7 in the table which in any case have been shown to be misspecified and may be neglected. The absolute value of the price elasticity of the demand for imports is also substantially below unity.

3.3 IMPLICATIONS OF THE RESULTS

It is necessary to draw attention again to the poor quality of the data. In addition to the limitations of the income series already highlighted, the import price index is imperfect as it

has been taken from three series each with a different base year published in World Bank, World Tables. The quality of measured import itself is suspect. This is largely due to the existence of a wide range of import controls surveyed in Section 2.(2)

Given these reservations, one may make the following inferences. A widely-held view is that the income elasticity of the demand for import in developing countries is (relatively) high. According to a UNCTAD study, the historical income elasticity of the demand for import in Nigeria over the period 1958 - 65 is 2.6 (Goreux, 1969, p. 67). Aboyade (1962, p. 55) also makes reference to a 'high' income elasticity in the country. Admittedly, these studies refer to earlier periods, in particular, the pre-1970 period. Nevertheless, the results of the present exercise do not support the contention of a high import elasticity. Furthermore,they are broadly in conformity with those of more recent studies even though the latter make use of different explanatory variables as the following two examples show.

The equation estimated by Ajayi (1975) is similar to Eqn (4) except that (a) his income series is the constant price GDP and (b) the reserve variable is the current level of foreign exchange. These are, of course, different from those used in the corresponding equation (i.e. 12 in the table) here. His results (which cover the period 1960 - 70) yield a shortrun income elasticity of 0.257 and a long-run elasticity of 0.351 (Ajayi, 1975, pp. 172 - 73), both of which are lower than any of the elasticities reported above. Another formulation employed by Ajayi involves

the deflation of Z_t, Z_{t-1} and F_t by the population. But the resulting elasticities are still lower than 0.5.

Ajayi's estimates show that the coefficients of Z_{t-1} and F_t are not statistically different from zero at any conventional level of significance. The same results were also obtained in this study when equations involving these variables were estimated. However, when F_{t-1} was substituted for F_t (the coefficients of the two variables become statistically significant as eqns 2 - 4 in the Table show). F_t is therefore not the appropriate reserve variable. Another difficulty with Ajayi's model is the use of per capita measures in his second formulation. In view of the doubts cast on the population statistics in Ch. 1 and Appendix 1, the use of per capita in the import function is considered inappropriate. Moreover, the relevance of the concept of foreign reserves per capita is not clear and no explanation is offered apart from the observation that the population has not been constant.

In a study covering a longer period (1955 - 71), Osagie (undated) obtained an income elasticity of 0.9. His dependent variable is constant (1962) price import while the independent variables are constant (1962) price GDP, relative prices and total import tariff collected deflated by the CPI. But the income elasticity again is below unity and nowhere as near the 2.6 figure obtained by UNCTAD.

To round up the analysis, separate demand functions were estimated for the public and private sectors to determine if there are any

differences between the income elasticities of demand in the two sectors.

(i) PUBLIC SECTOR

$$\log Z_t = \underset{(3.1)}{2.47} + \underset{(5.1)}{0.53} \log Y_t - \underset{(1.71)}{0.653} \log P_{rt} + \underset{(4.9)}{0.293} \log F_{t-1}$$

$\bar{R}^2 = 0.979$ D-W = 1.4 F(3,16) = 302

(ii) PRIVATE SECTOR

$$\log Z_t = \underset{(1.53)}{-1.16} + \underset{(9.8)}{0.88} \log Y_t - \underset{(2.47)}{0.55} \log P_{rt} + \underset{(4.76)}{0.19} \log F_{t-1}$$

$\bar{R}^2 = 0.992$ D-W = 1.96 F(3,16) = 821

By way of general comment, one may say that relative prices are not as important to the government as the level of foreign reserves (which is consistent with the use of a foreign exchange budget)judging from the $\bar{R}^2$ and especially the D-W statistic. The model does not explain the behaviour of public sector demand for imports as well as it does in the case of the private sector.

Given this observation, it is clear that the private sector has a higher income elasticity of demand for imports than the private sector.

3.4 SUMMARY

All the coefficients of the variables in the preferred import demand function are correctly signed and statistically different from zero at traditional levels of significance. The results show that the demand for import in Nigeria is a function of

aggregate demand, relative prices and the level of reserves in the previous period. The calculated income elasticity is between 0 and 1 while the price elasticity is about -0.5.

The results are broadly consistent with the foreign exchange-constraint-on-import hypothesis. Given the existence of quantitative restrictions on imports owing to foreign exchange shortfall on the one hand and an unwillingness to devalue on the other, the relationship between import and income may not be unidirectional. Indeed, given the significance of producer goods, especially capital equipment and also maintenance items and components as well as industrial raw materials, all of which are largely imported, there is a tendency for import to actually determine output (Hemphill, 1974, p. 637). When manufacturers of products which have a high import content are faced with severe foreign exchange problems, they may be forced to reduce their capacity or even shut down completely, thus leading to a fall in output(3). This possibility raises the problem of identifiability i.e. whether the estimated equation is that of a demand or supply function. If the latter is the case, then the estimated elasticities are even higher than actual elasticities so that the conclusions above with respect to income elasticities are still valid. But then it is no longer possible to obtain straightforward income elasticities of the demand for imports.

Now that some theoretical aspects of the balance of payments have been considered, one is in a position to assess the balance of payments measures taken by the Nigerian authorities.

4. AN EVALUATION OF NIGERIA'S BALANCE OF PAYMENTS POLICIES

Judged against their objectives, these measures must be reckoned as having failed, especially if the summary measures of the non-oil account as reported above are used. In order to facilitate the appraisal of the policies, they are divided into three: fiscal policy in a macroeconomic context and monetary policy; quantitative controls; and exchange rate policy.

4.1 EFFECT OF FISCAL AND MONETARY POLICY ON THE BALANCE OF PAYMENTS

The emphasis of the monetary approach to the balance of payments is on the implications for stock equilibrium of the continuing flow of financial assets necessary to finance a persistent balance of payments disequilibrium(4). It thus assigns a central role to monetary variables in the determination of the balance of payments. According to this approach, reserve accumulation is positively related to the rate of growth of domestic income but negatively to the rate of domestic monetary expansion. In a situation where domestic income cannot be varied easily, the rate of domestic credit expansion would have to adjust to equilibrate the balance of payments. Implicit in the approach is the assumption of the ability of the monetary authorities to control the level of interenational reserves by varying the composition of the money supply through monetary policy.

The primary role assigned to the stock of money ensures that the external account deficit is linked to the domestic budget deficit. The connection between the money supply and the government budget was explored in some detail in chapter 4. There it was shown that the inability of the Central Bank to control

the stock of money effectively stemmed in a large measure from the fiscal operations of the Federal Government. Within the framework established in chapter 3, government expenditure affects the money supply in two ways. The first channel is the familiar one whereby the government finances its budget deficit by borrowing from the Central Bank. The second mechanism is less conventional than the first and oeprates even in the absence of a budget deficit. The government derives the bulk of its revenue from levies on external trade. In the 1970's it was crude petroleum that was the principal source (see App. 1). Earnings from petroleum exports accrue directly to the government. The associated reserve inflow is therefore sterilized and is monetized only to the extent that the government injects this revenue into the domestic income stream by drawing down its deposits with the Central Bank to pay for its purchase of goods and services. This has the effect of increasing high-powered money and hence the money supply (given the money multiplier) in the manner described in Ch. 3 .

Using the monetary approach as a standard, all the policies surveyed in section 2 are inappropriate as they were concerned with the flows of real quantities rather than the stock of money. The approach leads to the view that tariffs - the main weapon utilized by the government - can have only a transient effect on the balance of payments (Mussa, 1976 pp. 333 - 51).

When account is taken of the argument developed in respect of monetary policy, the monetary approach suggests a simple reason for the inability of the authorities to check the deterioration

in the balance of payments in the second half of the 1970's and early 1980's : the failure of policy to control the rate of monetary expansion.

If this is so then the appropriate policy would have been to reduce the rate of domestic credit expansion. That the balance of payments continued to deteriorate in the late 1970's would then be attributable to the relative impotence of the Central Bank to effect a contraction of the money supply which was caused by expansionary fiscal policy. Given the high fraction of an increase in income that is spent on import, expansionary fiscal policy tends to worsen the balance of payments. Furthermore, this high ratio has the effect of reducing the expansionary impact of government expenditure on output and employment by reducing the expenditure multiplier in an income - expenditure model.

The conclusion then is that fiscal and monetary policy operated in a way that did not encourage the elimination of the balance of payments disequilibrium experienced by the country. This is not to say that the authorities were unaware of all the causes of disequilibrium. As stated earlier, the sharp deterioration in the balance of payments in 1964 led to the first use of active monetary policy. The principal cause of the ineffectiveness of the policy was fiscal policy as shown above and in Ch.4 . Since the authorities stated that direct fiscal measures were used to correct the balance of payments in view of the failure of monetary policy, it is necessary to assess the success or otherwise of those measures.

4.2 QUANTITATIVE CONTROLS

This term is used to cover such measures as tariff policy and direct controls - quotas, embargoes and foreign exchange controls. But the main concern here is with the fiscal measures.

On direct controls there is little to say apart from the fact that the result depends on the ability of the authorities to enforce the controls effectively. For instance, if a good is subject to a quota system (which implies that the amount permitted to be imported is less than the quantity demanded) then the effect is a reduction in the total import bill, assuming everything else remains the same. The same is even more true for a ban. Given the same level of exports, this leads to an improvement in the balance of payments. However, there are reasons to expect that the success of the authorities in enforcing an import ban or quota will be less than absolute, especially in Nigeria. Even with the system of import licensing in operation, a licence can be obtained for the importation of one commodity but used for a different one, thus by-passing the ban or quota(5). An even more obvious method of rendering direct controls ineffective is smuggling about which the authorities have complained several times(6). As an illustration of this point, consider the following situation. In 1978, the following items were banned : beer and stout, furniture, carpets, ready-made garments and fresh milk (CBN, Report, 1978, p. 6). The imports of the same commodities between 1977 and 1979 are as shown below (in millions of naira):

	1977	1978	1979
Beer and stout	72.4	5.5	2.5
Furniture	15.8	12.6	6.1
Carpet	10.4	6.9	3.9
Milk	97.8	112.4	134.5
Ready-made garments/clothing	103.8	100.4	37.6

SOURCE: FEDERAL OFFICE OF STATISTICS, REVIEW OF EXTERNAL TRADE 1979, pp. 16, 17, 22 and 24

Although the imports of most of these items fell in 1978 and 1979, they were nevertheless greater than zero. The import of milk in general actually went up thus suggesting that either some fresh milk was imported or consumers substituted other forms of milk for it. In either case the ban did not have the desired effect (as in the case of the other items). Therefore, the main problem with direct controls is enforcement. But even where controls are successfully implemented they tend to interfere with consumer behaviour which may generate inefficiency in the use of resources (of which smuggling is symptomatic).

Like most developing countries, Nigeria has an open, dependent economy which is subject to a foreign exchange constraint. Also, as in other developing countries, it is a long-term objective of the authorities in Nigeria to reduce the degree of dependence of the country on external trade as well as closing the 'trade-gap'. The foreign exchange constraint was removed in the decade following the end of the World War II by the primary 'export

boom' of the period and again in the mid-1970's by the 'petroleum boom' (see App. 1). However, these were temporary phenomena that could not be sustained as evidenced by the subsequent balance of payments difficulties.

Tariffs have been used extensively in Nigeria to restrain import. The main determinant of the effectiveness of a tariff policy in the present circumstances is the price elasticity of the demand for imports. As in the case of the price elasticity of demand for other goods, the elasticity is influenced by one important factor which is the availability of close substitutes within the same price range. In Nigeria, especially during the early part of the review period, few imported commodities have close domestic substitutes. Durable consumer goods are on top of the list of imported items with no close substitutes while most other items have no domestic counterparts that are comparable in terms of price and quality. In this situation, one would expect to find a low price elasticity of the demand for imports. The findings in section 3 are consistent with this expectation. The elasticities are relatively low. Therefore, subject to the criticism of the results expressed in section 3, one may say that the values of the price elasticity of the demand for imports are such that do not guarantee that increasing the tariff rates would improve the balance of payments.

In addition to using tariffs to reduce imports, Nigeria has used tariff policy as part of its inward-looking, import-substitution industrial strategy. Basically, this involves the imposition of relatively high import duties on finished goods competing with

domestic manufactures and the granting of preferential duties on inputs used by domestic manufacturers. The latter is traceable to the Industrial Development (Import Duties Relief) Act 1957 under which import duties relief (up to 100% and for a period not exceeding ten years) is granted to an industralist who satisfies one of three conditions(7). The scheme has been found to be highly ineffecient (Phillips, 1969) but it has been modified in recent times.

In addition to import duty reliefs, certain companies enjoy other tax incentives. The income tax relief takes the form of a complete exemption from income tax for a period of two or five years, depending on the volume of investment. The aim is to induce entrepreneurs to set up enterprises that will manufacture import substitutes.

But again the effectiveness of this policy has not been clearly demonstrated. A number of studies on the system of industrial incentives and its impact in terms of encouraging domestic manufactures in various countries have concluded that such incentives do not play a significant role in attracting or inducing industrial investment(8). In the case of Nigeria, a similar study shows that 'the generous tax incentives ... appear to have had only a marginal effect' (May, 1965, p. 253). Also, after analysing the data obtained from the relevant ministries and interviews with a number of entrepreneurs, Phillips concludes that

> 'Income tax relief does not necessarily play a crucial role in the investment decisions of pioneer companies ... most of the companies would probably have set up without the incentives, and some of those denied it went ahead nonetheless'
>
> (Phillips, 1968, p. 47)

The policy is therefore inappropriate. If it succeeds in stimulating industrial output, it would still have an adverse effect on the balance of payments. Partly as a result of its operation, the composition of imports has shifted markedly since 1960 in favour of producer goods. In that year, consumer goods imports amounted to 53% of the total but fell to 25.5% in 1974. Over the same period, producer goods - capital equipment plus raw materials - enlarged their share from 43.1 to 68.9% (the residual is made up of passenger car import). Yet it is the capital goods category which has always received preferential tariff treatment and foreign exchange allocation. Given that a capital goods sector is virtually non-existent in Nigeria and expenditure on foreign inputs constitutes about 75% of total raw materials cost of the manufacturing sector (CBN, Report 1980, p. 18), it is possible for increased domestic production of import substitutes to worsen the balance of payments.

4.3 EXCHANGE RATE POLICY

This is the last set of policies to be considered. It is customary to discuss exchange rate policy within the context of a devaluation and this tradition is followed here for the sake of convenience. In any event, the need for revaluation has not been as pressing as that of devaluation.

Devaluation operates by changing the relative prices of tradeables vis-à-vis non-tradeables. The immediate effect is to increase the prices in domestic currency of exports and imports even though these prices may be unaffected in terms of foreign currency. The

higher domestic prices are expected to enable exporters to offer higher prices to producers who, in turn, are expected to increase the volume of production. In the shortrun, the effect of devaluation on exports is positively related to the level of excess capacity in the export sector as well as to the ease of shifting resources from the other sectors to this sector. In order to maintain the flow of resources to the export sector, it is necessary to keep the relative prices of exports at a higher level than before the devaluation.

As has been pointed out (Bhagwat and Onitsuka, 1974, p. 415), the effect on export supply of a devaluation is different from that of normal fluctuations in external prices. Given a fixed exchange rate, producers base their production decisions on the expected foreign prices of their products. These prices may rise or fall but a devaluation makes the direction of change certain. The favourable expectations generated by a devaluation are reinforced if the authorities simultaneously take measures which are inducive to export expansion. Therefore, in normal circumstances, a devaluation is expected to have a favourable effect on exports.

But no such statement can be made with respect to imports. In the first instance, the higher import prices are expected to have a negative effect on the demand for imports - and encourage the substitution of domestic for imported goods. But as imports are a positive function of income, the higher level of income induced by the expansion in export tends to raise the demand for imports. The net effect of these opposite forces cannot be determined a priori. However, for a developing economy like

Nigeria's, the net effect is probably positive. It will be recalled that producer goods take well over half of the total import bill in Nigeria and that the domestic production of these goods is a negligible proportion of total requirements. The resulting increase in the import of producer goods necessary to satisfy the extra domestic demand may more than offset the decrease in imports brought about by their higher prices. Moreover, the exercise in section 3 shows that one cannot take for granted that the price elasticity of the demand for imports is sufficiently high to offset the increase in producer goods import. For these reasons, a devaluation may have a perverse effect on imports. This is almost certain if the devaluation is followed by trade liberalization.

The Nigerian authorities did not use devaluation as a tool of policy until February 1973 (see section 2.2). The first opportunity for devaluation came with the 1967 sterling devaluation. The official settlements deficit was ₦20 m at the end of 1966 and ₦62.2 m a year later. The current account deficit was ₦184.2 m and ₦166 m in the corresponding periods. The level of foreign exchange assets fell from ₦172.6 m at the end of January to ₦103.7 m at the end of October 1967, just before the devaluation of sterling. By the end of the year, the level of reserves stood at only ₦77.1 m. Yet the country did not follow the devaluation of the currency of its main trading partner.

The main reason given was that Nigeria's balance of payments

> 'was not in fundamental disequilibrium'

and that devaluation

> 'would not improve the competitive position of the country's primary exports, the prices of which are determined not by domestic costs but by world market

forces'

(CBN, Report, 1968, p. 11).

But as seen in Section 2.1, the current account was in deficit between 1955 and 1972. The disequilibrium argument therefore is not particularly strong. The second part of the explanation is thus regarded as offering a stronger reason for the non-devaluation of the Nigerian currency. It was widely believed at the time that the price elasticity of the foreign demand for Nigeria's exports which were all primary products was low (excepting petroleum). In such a situation, the resulting increase in demand occasioned by the devaluation might be insufficient to compensate for the fall in prices of exports in foreign currency. On the supply side, there was the question of a long lag in response to a price change. The main export crops at the time were cocoa, groundnut, palm produce and crude petroleum. The price of crude oil was denominated in dollars. Of the other products, groundnut has the shortest gestation period of a year. The gestation period for cocoa is seven years and is even longer for oil palm. The influence of the length of gestation period has been pointed out by Gervers who argues that 'the sudden increase in cocoa output in 1961 was partially a consequence of the consequence of high prices in 1954 which stimulated cocoa plantings' (Gervers, 1963, p. 69). The shortrun effect of a devaluation on exports would have been very small.

The argument above indicates that devaluation may not have the expected effect on the import bill. The low elasticities suggested by the exercise in section 3.3 imply that the import bill may fall not appreciably. Furthermore, the import-substitution

policy could result in a higher inflation rate than would have prevailed in the event of a devaluation. Higher input prices would be the source of this inflationary tendency.

Finally, 1967 was the first year of the civil war during which the importation of arms increased sharply. A devaluation would then have increased the domestic currency value of expenditure on arms. For all these reasons, and given the already stringent controls on consumer goods imports surveyed earlier, it is concluded that it was a rational policy not to have devalued the Nigerian pound in 1967.

Four reasons were given for the 10% devaluation of the Nigerian currency in February 1973. They are numbered here for each of reference :

> '(a) to prevent the country's import bill from rising to unmanageable proportions (b) to ensure that the local currency value of exports did not fall (c) to protect the products of local industries from excessive competition from imports and (d) to discourage increased outflow of capital'
>
> (CBN Report, 1973).

From the results obtained earlier in relation to the price elasticity of the demand for imports, it is doubtful if a devaluation of only 10% could have had a significant effect on the import bill given that other countries, including some important trading partners also devalued by that amount or higher. Explanation (a) is therefore not a plausible one. (c) and (d) may be defended from a point of view different from that implied by the authorities. As seen in the previous section, the objective embodied in (c) was already being pursued through a different

set of measures. This is the import substitution policy which involved imposing very high rates of duties on imported finished goods which competed with domestic manufactures while simultaneously granting concessionary rates of duties to importers of producer goods. Also, earlier in 1972, the Nigerian Enterprises Promotion Decree 1972 was promulgated by the Government. According to this decree, certain categories of business enterprises were to be owned exclusively by Nigerians while the indigenous equity participation in the remaining enterprises was fixed at a minimum of 40 and 60% respectively. Alien entrepreneurs were expected to sell their equities to meet the statutory requirements. Anticipating the possible adverse effects of the resulting capital outflow, the government laid down very stringent conditions regarding the repatriation of the proceeds from the sale of businesses (CBN, Report, 1973, p. 14). These would have been sufficient to prevent an undesirable degree of capital outflow. However, the use of devaluation to achieve the goals stated in (c) and (d) is a welcome development since it reduces reliance on direct controls which are inevitably inefficient. As for explanation (b), there is little ground for argument since it is a direct consequence of devaluation.

In sum, the decision to devalue the naira in 1973 on its own was rational. But it is doubtful if it had the intended effect. In the following table, oil transactions have been excluded from the balance of payments statistics on the ground that the devaluation did not affect them as they were denominated in a foreign currency.

TABLE 6.4 : NON-OIL CURRENT ACCOUNT IN MILLIONS OF NAIRA

	MERCHANDISE		TRADE BALANCE	CURRENT ACCOUNT BALANCE
	EXPORTS	IMPORTS		
1971	340.4	1028.5	-688.1	-830.0
1972	258.0	944.9	-686.9	-935.0
1973	384.9	1183.8	-798.9	-1286.1
1974	429.1	1684.9	-1255.8	-1994.6
1975	362.4	3603.5	-3241.1	-4026.4
1976	429.5	5053.5	-4624.0	-5538.8

SOURCE : CENTRAL BANK OF NIGERIA ANNUAL REPORT 1973 - 78

The table shows that the value of non-oil export rose in 1973 and 1974. But this increase cannot be attributed to the devaluation. While the index of average weekly prices (c.i.f.) in London of Nigeria's major agricultural export commodities (1960 = 100) rose from 91.8 in 1972 to 160.6 in 1973 and 227.2 in 1974, the index of output of agricultural export commodities (1960 = 100) actually declined from 84.2 in 1972 to 68.8 in 1973 and rose slightly to 71.1 in 1974. As is clear from the table above, the trade and current account deficits widened progressively over the years.

Two reasons may be adduced for the ineffectiveness of the 1973 devaluation. The low shortrun elasticity of the supply coupled with an allegedly equally low price elasticity of the demand for the country's non-oil export commodities played an important role in the failure of export volume to expand in response to the

devaluation. Secondly, it was shown in Ch. 2 that the government pursued an expansionary policy during the period in question. Furthermore, the general increases in wages and salaries were effected during the same period. This, of course, serves to illustrate the point that devaluation alone cannot solve a country's balance of payments problems; it needs to be supported by other policies.

4.3.1 THE CASE FOR AN APPROPRIATE EXCHANGE RATE POLICY

The discussion above relates to two specific instances in which the authorities contemplated ~~on~~ devaluation as a balance of payments measure. The following paragraphs deal with the use of exchange rate policy in a more general context.

In many developing countries outside Latin American, there is a marked reluctance on the part of the authorities to use currency depreciation, especially in its starkest form of devaluation, as a means of strengthening the balance of payments (Bird, 1983, p. 461). Nigeria is not an exception to this general rule. Since a domestic currency was introduced in 1959, there has been only one case of devaluation which has already been considered. This was in spite of the apparent 'fundamental disequilibrium' in the balance of payments over a long period of time as noted earlier in the chapter. Moreover, the devaluation was triggered by that of the major reserve currency - the US dollar - which was followed by the devaluation of sixty-four other currencies while some important currencies (Italian lira and the Japanese yen along with the pound sterling, Canadian dollar, the Irish pound and the Swiss franc which were already floating) were

floated. The effective rate of devaluation was therefore substantially less than the nominal rate of 10%. Since then, no attempt has been made to devalue the naira on the ground that a devaluation would compound the country's economic problems. The examination of the validity of this argument is the purpose of the rest of the section.

There are some indications that the naira is effectively overvalued. This proposition will be illustrated with the following simple model. Assume country A is small in the sense that it cannot influence its terms of trade. Assume further that : it is initially in full equilibrium at a fixed exchange rate; the world inflation rate is zero; and the country starts to expand the domestic component of the monetary base at a given rate. Then, given full convertibility, an excess supply of the domestic currency will develop i.e. domestic residents trade excess domestic money for foreign goods and assets. Under these conditions and constant demand for money, a persistent balance of payments deficit will ensue with continuous domestic credit creation. The extent to which this situation can continue will depend on the level of foreign reserves and how far the authorities are prepared to allow the depletion of reserves. Sooner or later, the government is compelled to introduce foreign exchange controls. In order to make controls effective, A may then centralize its reserves with an official agency.

This scenario is typical of developing economies. As Krueger (1982, p. 1060) has pointed out:

> 'Exchange control has been a frequently-used device in developing countries to contain the excess demand for foreign exchange. In general, governments adopting exchange controls have devised rationing rules by which to allocate scarce foreign exchange among potential claimants. The domestic monetary authority, while still creating credit, imposes exchange control to ration the limited supply of foreign exchange, requiring that all foreign exchange receipts be surrendered to the government. To allocate the foreign exchange thereby attained there are two possibilities: (1) the government auctions off the foreign exchange receipts to the highest bidders; or (2) the government adopts a rationing (licensing) device to allocate scarce foreign exchange reserves'.

It thus follows that the existence of increasingly tight foreign exchange controls as existed in Nigeria suggests that the domestic currency is overvalued. The causes of the overvaluation of the currency include the unprecedented high rates of domestic monetary expansion and inflation in the 1970's. In 1977, 1978 and 1979 the annual rate of inflation in Nigeria averaged 19.3, 18.7 and 11.1% respectively. The corresponding rates in industrial countries (as defined in IFS) which were the country's principal trading partners were 8.4, 7.2 and 9.1%. Nigeria's balance of payments deficit widened from ₦527.2 m in 1977 to ₦1293.6 m in 1978. The domestic budget deficit also rose from ₦781.3 m in 1977 to ₦2290.7 m in 1978. Yet, the naira appreciated in terms of the US dollar (see App. Table 6.3) and other major currencies during this time. The external value of the naira therefore appeared to be negatively related to reserve movement, the rate of inflation and the domestic budget deficit. Another sign of the overvaluation of the naira is the widening gap (in relative terms) between the official and the free market rate as measured, for example, by the rates prevailing outside the legal framework. Two factors enabled the government to

maintain the external value of the currency at artificially high levels while postponing a balance of payments crisis to the early 1980's. These were erratic movement of the earnings from oil and stringent exchange controls.

The overvaluation of the naira is not in doubt; what is disputable is the extent of the overvaluation. But that issue is not of immediate importance here. The main concern is why the currency was allowed to be overvalued. The usual argument against devaluation as a balance of payments policy in Nigeria is that a depreciating naira would not be in the interest of the economy because of the following considerations. First, petroleum, the main export item, is not affected by a devaluation. This is because its price is denominated in a foreign currency. Furthermore, the prevailing institutional arrangements in respect of the other significant export commodities which are primary agricultural products may make devaluation inappropriate. It will be recalled that devaluation exerts a favourable impact on exports through price incentives which eventually lead to a higher level of exports. But the marketing of many primary products in the world market is subject to international commodity agreements which discourage signatories from enlarging their shares through price competition (Bird, 1983, p. 464). For these reasons, it is argued, a devaluation is unlikely to have a significant favourable impact on exports. Second, import prices in domestic currency will rise following a devaluation. This will tend to exert some upward pressure on the price level which is against the government's objective of price stability. Inflation may result from higher import prices or excess wage claims which may eventually lead to a

devaluation-inflation spiral (Ozumba, 1978, p. 14). Also, as producer goods account for over half of total import, another important objective of policy-economic growth - may be adversely affected. Moreover, import substitutes have a high import content as explained earlier : manufacturers import almost all their capital goods; many use mainly imported raw materials; while others hire foreign experts or make use of foreign loans (Mawuli, 1975, p. 69). These factors may operate in a way that the total value of import in domestic currency rises with a devaluation. Finally, as seen in section 3.1, for devaluation to have its maximum potential effect on the balance of payments, it may be necessary to take supportive deflationary fiscal and monetary measures. But these may not be suitable for an economy with considerable unemployment and a lower than desired rate of economic growth.

In the shortrun, then, a devaluation is an ineffective policy in Nigeria. However, the argument is incomplete in at least two respects. In the first instance, it concentrates on the shortrun and fails to pay adequate attention to longer-run considerations. Secondly, it ignores the fact that devaluation impinges on other objectives of economic policy in addition to the balance of payments.

It was explained in Ch. 2 that the emergence of oil as a principal foreign exchange earner is a recent phenomenon. Before the emergence of oil Nigeria depended on other primary, mainly agricultural products. Prominent among them were cocoa, groundnut, oil palm produce, cotton and rubber. Some of these crops

have been studied and some estimates of supply elasticities are available although the estimates are contradictory(9).

As in the case of many primary products, the supply elasticities of these crops are generally below unity. However, they are significantly above zero while some have elasticities not far from unity (e.g. palm oil and tocabbo) and that of rubber is far in excess of unity (1.75). The influence of the marketing arrangement must also be taken into consideration : the boards paid producers prices which were well below the prevailing world ones. After reviewing the evidence on supply response, Rwegasira (1984) concludes that

> 'In brief, the main findings from the studies in sub-Saharan Africa indicate that, in a good number of cases, own-price elasticities are positive and significant even in the shortrun, albeit not large; that, in general, price elasticities over a long period tend to be larger than those in the shortrun; and that, furthermore, the production of some crops can rise without an equivalent fall in those grown for food. The conclusion to be derived from the above survey is simply that exchange-rate changes whose price effects are successfully passed on to producers can help increase the output of individual crops and minerals'
>
> (p. 457)

From this review it is clear that one cannot justifiably assume that on balance a devaluation would leave exports unaffected. It was earlier stated that the 1973 devaluation did not have the expected effect on exports. However, this is not inconsistent with the points just made. This is because the devaluation in 1973 was not accompanied by appropriate policies. Although the naira was devalued by the full extent of the dollar devaluation by the end of 1974 the naira had appreciated considerably vis-à-vis the dollar as the authorities ceased to observe any margin that year. It was also in 1974 that the country

witnessed a massive growth in export earnings and government revenue. This removed the need for financial discipline and, as shown in Ch. 2, government expenditure was allowed to rise to an unmanageable proportion. Furthermore, the largest wage claims in the country were settled early in 1975 - only two years after the devaluation. All these had the effect of robbing the 1973 devaluation of its potential effect.

If devaluation could in fact stimulate export it would be contributing positively to another objective of economic policy in Nigeria. It would create favourable conditions for economic diversification (a declared objective) by encouraging the development of alternative export commodities besides oil as well as domestic import substitutes.

Given that a currency is overvalued, the reduction in the degree of overvaluation through devaluation or depreciation is likely to have a salutory effect on resource allocation. Currency overvaluation tends to understate import relative to export prices. Imports are made cheaper in domestic currency than their true relative prices while domestic goods are correspondingly overpriced. By bringing the exchange rate closer to its true value, the inefficiency generated by the distortion of relative prices may be reduced. For instance, as imported raw materials costs rise as a result of a devaluation, domestic producers of such commodities which can be grown locally (e.g. wheat and coffee in Nigeria) are given an incentive to raise their output.

Furthermore, a more appropriate exchange rate policy would tend

to reduce the need for exchange controls. It has already been stated that the external value of the naira so far has been maintained at an unnaturally high level through reserve depletion and stiff foreign exchange controls which interfere considerably with the utility-maximizing behaviour of economic units.

Finally, in addition to adopting a policy which leads to the exchange rate getting out of line with its 'true' or free market values, the Central Bank uses an inconsistent formula for deriving the exchange rate of the naira. It is generally true that the construction of an index number raises the problem of weighting. In the present case, it appears that something is fundamentally wrong with the weighting of the currencies used in determining the exchange rate of the naira. The exact weights are not made public but it is known that the US$ is given a weight which is apparently out of proportion to its relative importance(10).

4.3.2 POSTSCRIPT ON EXCHANGE RATE POLICY : THE CHOICE BETWEEN DEVALUATION AND OTHER POLICIES

Exchange controls have a number of advantages over devaluation and are more widely used in developing countries. The principal merit of exchange controls is that they 'exert a prompt, direct and predictable effect on imports; they do not rely on the intermediation of a price change and therefore on the size of price elasticities to improve the balance of payments' (Bird, 1983, p. 476). Also, exchange controls theoretically are more flexible than devaluation. Controls can be used to restrict imports

more selectively than other methods like devaluation which operate through the market mechanism. In Nigeria, as seen previously, controls have been used to discourage the importation of commodities which the authorities regarded as 'luxuries' while priority is accorded to those deemed as 'essentials' or 'necessities'. Consumer goods in general have also been discriminated against in favour of producer goods. Furthermore, controls can be used to minimize their undesirable effects on a designated income group unlike devaluation which indifferently affects all income groups. Finally, devaluation relies on deflating aggregate demand. But since controls affect imports directly, they do not necessarily lead to a decline in real income.

Devaluation, on its part, has an edge over exchange controls in some respects. Controls require some form of administration such as planning and implementation. The physical administrative cost could be high. Moreover, as they interfere with consumer behaviour there is no guarantee that they will be effective (see section 4.2). The existence of controls implies an excess demand for the commodities in question. Unless coupon-book rationing is adopted, importers and traders will earn an economic rent which is financed by consumers as they bid up the available supply. If the controls are accompanied by an effective ceiling and the domestic currency is overvalued (which is almost almost certain to be the cause of the imposition of controls in the first instance) smuggling of the affected goods will be encouraged. Furthermore, as Killick (1978) has argued, the system of exchange controls nurtures malpractices such as corruption and the declaration of false information on the quest for

larger allocations of foreign exchange.

Finally, a basic weakness of controls is that they are not long-term solutions to a problem of disequilibrium. This is because they suppress rather than solve the problem. As Mawuli (1975, p. 66) has put it

> 'Import licensing and exchange controls cannot be relied on to solve a balance of payments problem permanently. At best, they are stop-go measures that can create an artificial balance which will require increasingly extensive controls until some better solution to the problem is found'

Even in the shortrun it is by no means clear that controls would improve the balance of payments (as distinct from the balance of trade). In the case of Turkey, Krueger (1975) has found that the balance of payments deteriorated after controls were imposed. Yet, experience has shown that developing countries with substantial exchange controls have found it difficult to dismantle them. Thus the distortion in relative prices caused by currency overvaluation (for which the controls are designed to defend) persists for lengthy periods. This has the effect of denying the country concerned access to 'soft loans' such as provided by the IMF. This institution has developed a policy of requiring devaluation as a precondition for a loan. Many countries which require such loans (Nigeria inclusive) are, of course, reluctant to meet the condition.

4.4 NIGERIA'S EXTERNAL RESERVE POLICY

In Ch. 3 it was shown that the authorities regarded the equivalent of two months' import bill as the minimum tolerable level of foreign exchange reserves. While that level provides the

lower limit of reserves the policy is silent on what action should be taken whenever the level of reserves is above the limit. From all available evidence, the authorities have no preference for any specific level of reserves. Instead, the implication that can be drawn from official statements and policy actions is the maximization of the net inflow of reserves. But this does not provide any clear working guidelines and, in any event, reserve flow is largely out of its control except as far as imports are concerned.

The nearest thing to a reserve policy is the use since 1971 of an annual foreign exchange budget to spend in the year in question to determine and how far trade liberalization can be carried out. The weakness of this ad hoc measure became clear in 1974 when net reserve inflow reached an unprecedented level. Apparently, the authorities did not know how to manage that level of reserves and their case was not served by the instability of exchange rates that started as far back as 1971. The government was therefore compelled to set up an 'Investment Management Committee' in mid-1975. The Committee was charged with advising the authorities on how best to deploy the foreign assets. Its recommendations were not made public so it is not possible to say whether or not they were accepted. But the severe balance of payments problems that began in 1978 indicate that an optimal rate of depletion of the reserves was not followed. The absence of a long term reserve policy has been criticised by Onoh (1983, pp. 80 - 81) who argues that

> 'There is no external target for the country and there are no plans for realizing any reserve target. External reserve levels realize themselves somewhat accidentally,

> as was the case in 1974, rather than through deliberate policy. There are no plans on how best to invest external reserves more productively. Instead of co-ordinated reserve plans Nigeria engages in the annual review of the balance of payments position to determine whether to liberalize or restrict imports and whether to increase or reduce travelling allowances, etc. If the external reserve level of Nigeria shows signs of strain, Nigerian authorities embark on panic monetary, fiscal and other economic intervention measures in an effort to correct the situation and stabilize reserve levels. Monetary and fiscal policies are juggled in the hope of correcting the situation but quite often the unco-ordinated measures only succeed in aggravating the situation'

The use of annual review of the balance of payments position to determine the policies to be taken has disadvantages. Expectations may not be realized and the measures which were originally considered appropriate may turn out to have undesirable effects. Secondly, it fails to realize that the prevailing conditions are the outcome of past policies, i.e. it does not pay sufficient attention to the lag in policy. As a result, the measures may not be allowed to have their intended effect as happened in 1979 and 1980 when the unexpected improvement in exchange earnings led to the removal of controls and other expansionary measures such as the doubling of the minimum wage. Finally, it introduces a great deal of uncertainty into the economy. Consumers and producers are uncertain of what measures will be taken - which commodities will be taxed and by how much and what incentive schemes will be removed or introduced. This may lead to much speculation which may not further the government's objectives of economic policy. As a result of all this, it is concluded that a stable, long-term policy would be preferable to the present system.

5. CONCLUSION

Nigeria has had a chronic balance of payments problem over the period stretching from the 1950's to the early 1980's. The disequilibrium was temporarily corrected by the petroleum boom of 1973 - 75 and 1979 - 80. The main weapons used for adjusting the balance of payments were direct and fiscal controls on imports and foreign exchange transactions. In order to appraise these measures, it was found necessary to apply some yardsticks against which to judge them. Using the monetary approach to the balance of payments, the inability of the authorities to eliminate the deficit was attributed to their failure to control the rate of domestic credit creation which had already been analysed in Ch. 4. But the monetary approach is limited in its application to Nigeria by certain factors : it neglects the goods and financial markets which also influence the balance of payments and concentrates on the money market; one of its crucial assumptions - a stable demand for money function - is unfulfilled in Nigeria (from Ch. 3); and it assumes that there are no structural rigidities in the economy which is contrary to what obtains in Nigeria and most other developing countries. As a result, it was found necessary to use an alternative to the monetary approach which is the absorption approach which was the mainstream balance of payments theory during much of the review period. It was found that the direct and fiscal controls were not as effective as the authorities would have desired because of many factors. The demand for imports had a low price elasticity and this tended to lower the effectiveness of quantitative controls such as tariffs. Direct controls such as quotas, loans and import licensing could not be effectively

enforced. But the fundamental defect of these measures is that they cannot produce a lasting effect on the balance of payments.

A potentially more effective weapon, devaluation was not actively used. The currency was evidently overvalued but it was devalued only once and by only 10%. The year 1973 marked the beginning of the inflow of foreign exchange on a scale previously unknown and it was a time when the currency was allowed to appreciate. However, from 1977 when the need for depreciating the naira arose, it continued to appreciate. The overvaluation of a currency, it was seen, imposes a cost on the economy. This cost has many elements. The most obvious is the cost of administering the exchange controls that are necessary to maintain the value of the currency at its artificially high levels. Others are the adverse effects of these controls on the economy.

It was seen that the non-use of the devaluation weapon was due to the view that exports would be largely unaffected while import prices would rise. The review of available evidence showed that the notion that devaluation would not affect exports is disputable while the effect on imports (by raising their relative prices closer to their true values) could be beneficial. Other considerations - mainly long-term in nature - indicated that devaluation could be a viable alternative to exchange controls.

The exercise has some policy implications. First is the identification of the fundamental source of the balance of payments problems which is excessive growth of aggregate demand. Aggreg-

age demand is in turn determined by the rate of domestic credit creation which is itself a function of government fiscal activities (Chs. 2 and 4). A necessary condition for restoring equilibrium in the balance of payments then is the control of the fiscal deficit in particular and government expenditure (including incomes policy) in general.

A second implication is the need to try market-related measures and to de-emphasize fiscal and direct measures. But the use of policies which work through the price mechanism (principally devaluation) should be accompanied by appropriate fiscal and monetary policies. This proviso is important because, given the rate of devaluation, there exists a rate of expansion of the domestic component of the monetary base which will wipe out any shortrun balance of payments effects of devaluation. This is also true of expansionary fiscal policy which ultimately is reflected in domestic credit creation.

FOOTNOTES : CHAPTER 6

1. As in Chs. 2 and 3, the additive and multiplicative forms of eqn (1) were estimated but in each case the performance of the latter was superior to that of the former. As the multiplicative version has the further advantage of yielding elasticities directly, only the loglinear estimates are reported.

2. Controls affect the quality of import data in two ways. (1) Measured imports do not reflect the intensity of demand which is repressed. (2) Stiff import controls tend to encourage illegal activities (e.g. smuggling) which are, by definition, unrecorded. Separate demand functions were estimated for each single-digit SITC Commodity Sections. Section 7 (Machinery and Transport Equipment) turned out to have the best fit. As commodities in that section are relatively bulkier and therefore more difficult to smuggle than commodities in other sections and as section 7 commodities have been subject to less stringent import control than others, the results for the different sections are consistent with the hypothesis of an incorrectly measured dependent variable.

3. This has been the experience of the country since 1978. See CBN, Report, 1981, p. 19

4. On the monetary approach to the balance of payments, see Johnson (1976a), Zecher (1976), Mussa (1976) and criticisms by Magee (1976) and Currie (1976).

5. This is a point that is emphasized by Falegan (1978), p. 16.

6. Consider the following statement by the Central Bank in 1981:
   As in the previous few years, manufacturing production was inhibited by the shortage of raw materials, disruption of electricity supply and increased smuggling. In particular, smuggling effectively hampered the ability of the various industries to compete in the domestic market, to the extent that some firms had to reduce their levels of production and lay off workers'
   (Annual Report, 1981, p. 19). In 1978, it had stated:
   'In order to encourage local production, several imported items were banned'
   (Annual Report, 1978, p. 6).

7. 'The first is that without the import duty relief his costs would be such that his products could not compete with imported equivalents, or he could not develop an adequate market in the country. The second is that the rate of duty on his imported materials is higher than the rate of duty on the imported finished goods produced with the same materials. And thirdly, he

must satisfy that the goods to be imported are capital goods or parts thereof'
(Phillips, 1967, p. 318).

8. Examples of such studies include Heller and Kauffman (1963), Ross and Christensen (1959) and Joel (1971).

9. Examples of price elasticity estimates include: (i) Cotton : 0.23 to 0.38 (Oni, 1969a); 0.67 (Diejomaoh, 1972): (ii) Groundnuts : 0.24 to 0.79(Olayide, 1972); (iii) Cocoa : 0.45 to 0.80 (Behrman, 1968); Palm kernels : 0.22 to 0.28 (Oni, 1969b); 0.25 (Diejomaoh, 1972). Palm oil : 0.42 - 0.70 (Oni, 1969b); 0.41 (Helleiner, 1966); 0.81 (Diejomaoh, 1972). Tobacco : 0.60 to 0.82 (Adesimi, 1970). Rubber : 0.04 to 1.75 (Olayemi and Olayide, 1975).

10. The following exchange rates were reported in West Africa (1984):
Date: 17 October 1984
Sterling/dollar rate : £1 = $1.2063
Central Bank of Nigeria quoted rate : ₦1 = $1.3029
Rate implied by cross rate : £1 = ₦0.9259
Rate actually quoted by the Central Bank : £1 = ₦1.0667

The inconsistency in these rates is self-evident.

TABLE A-6.1 EXPORT OF MAJOR COMMODITIES AS % OF THE TOTAL

Year	Cocoa	Groundnuts	Palm oil	Cotton	Rubber	Crude oil
1960	21.7	16.6	23.6	3.7	8.4	2.6
1961	19.4	21.4	19.1	6.4	6.3	6.6
1962	19.8	22.9	15.3	3.5	6.7	10.2
1963	17.1	22.7	16.0	5.0	6.2	10.7
1964	18.7	19.8	14.8	2.9	5.6	15.0
1965	15.8	17.8	14.9	1.2	4.1	25.4
1966	9.9	19.4	11.8	1.2	4.0	32.3
1967	22.4	18.7	3.7	1.7	2.6	29.7
1968	27.1	24.8	4.8	1.6	3.0	17.5
1969	19.2	16.2	3.2	1.1	3.0	41.2
1970	16.8	7.5	2.7	1.5	2.0	57.6
1971	12.0	3.4	2.2	0.9	0.9	73.6
1972	7.8	2.5	1.1	0.1	0.5	82.0
1973	5.8	3.0	0.8	0.2	0.9	83.1
1974	3.2	0.4	0.7	0.0	0.2	92.6
1975	4.2	0.0	0.4	0.0	0.1	92.7
1976	3.6	0.1	0.4	0.0	0.2	93.7
1977	4.9	0.0	0.4	0.0	0.1	92.7
1978	6.7	0.0	0.2	0.1	0.2	89.1
1979	4.4	0.0	0.1	0.0	0.1	93.8
1980	2.4	0.0	0.1	0.0	0.0	96.1
1981	0.9	0.0	0.1	0.0	0.0	98.2

TABLE A-6.2 PERCENTAGE DISTRIBUTION OF IMPORTS

	CONSUMER			CAPITAL & OTHERS				
	DURABLE	NON-DURABLE	TOTAL	CAPITAL GOODS	RAW MATERIALS	TOTAL	MISCELLANEOUS	GRAND TOTAL
1950	7.0	53.0	60.0	30.0	10.0	40.0	-	100
1960	10.0	46.0	56.0	32.0	11.0	43.0	1.0	100
1963	8.7	44.8	53.5	22.8	22.0	44.8	1.7	100
1967	7.2	33.3	40.5	31.0	27.0	58.0	1.5	100
1970	5.8	23.0	28.8	37.7	31.0	68.7	2.5	100
1974	7.8	21.4	19.2	37.2	33.0	70.2	0.6	100
1977	8.4	20.1	28.5	48.2	23.2	71.4	0.1	100
1980	8.9	30.7	39.6	33.5	26.8	60.3	0.1	100
1981	12.2	32.2	44.4	31.1	24.4	55.5	0.1	100

Source : Central Bank of Nigeria, Annual Reports, 1965-81; Aboyade (1966), Table 1, p.8, for 1950 and 1960.

TABLE A-6.3 **EXCHANGE RATE OF THE NAIRA AGAINST $ AND SDR**

	US $ PER NAIRA AVERA.	US $ PER NAIRA END	SDR PER NAIRA AVERAGE	SDR PER NAIRA END
1955	1.4000	1.4000	1.4000	1.4000
1956	1.4000	1.4000	1.4000	1.4000
1957	1.4000	1.4000	1.4000	1.4000
1958	1.4000	1.4000	1.4000	1.4000
1959	1.4000	1.4000	1.4000	1.4000
1960	1.4000	1.4000	1.4000	1.4000
1961	1.4000	1.4000	1.4000	1.4000
1962	1.4000	1.4000	1.4000	1.4000
1963	1.4000	1.4000	1.4000	1.4000
1964	1.4000	1.4000	1.4000	1.4000
1965	1.4000	1.4000	1.4000	1.4000
1966	1.4000	1.4000	1.4000	1.4000
1967	1.4000	1.4000	1.4000	1.4000
1968	1.4000	1.4000	1.4000	1.4000
1969	1.4000	1.4000	1.4000	1.4000
1970	1.4000	1.4000	1.4000	1.4000
1971	1.4030	1.5200	1.3989	1.4000
1972	1.5200	1.5200	1.4000	1.4000
1973	1.5200	1.5200	1.2750	1.2600
1974	1.5904	1.6228	1.3224	1.3254
1975	1.6248	1.5957	1.3382	1.3361
1976	1.5959	1.5853	1.3823	1.3645
1977	1.5514	1.5352	1.3288	1.2638
1978	1.5745	1.5444	1.2576	1.1855
1979	1.6591	1.7841	1.2842	1.3543
1980	1.8297	1.8367	1.4058	1.4401
1981	1.6292	1.5701	1.3817	1.3489
1982	1.4854	1.4920	1.3455	1.3525

SOURCE : IMF, INTERNATIONAL FINANCIAL STATISTICS YEARBOOK 1984

CHAPTER SEVEN

CONCLUSION

As set out in the introductory chapter, the principal aim of the study was to evaluate macroeconomic policy in Nigeria over the period 1960 - 81. Results of the analysis show that the performance of policy has been less than successful. Neither the balance of payments nor the rate of inflation appeared to have been positively influenced by policy. Furthermore, the rate of growth of output was determined more by external factors than domestic policy. Many factors contributed to the unsatisfactory performance of macroeconomic policy. By far the most important of these was the Federal Government fiscal operations coupled with the improper use of some weapons of control. Others include:

(1) the absence of a consistent macroeconomic policy, and

(2) the constraints imposed by the structure of the economy.

These points are explained in turn.

7.1 FEDERAL GOVERNMENT FISCAL ACTIVITIES AND MACROECONOMIC POLICY

The general theme of the study is that most macroeconomic problems which beset the Nigerian economy during the review period had their root in the fiscal activities of the Federal Government and its policies. First, the growth of expenditure was allowed to run out of control (Ch. 2). Then, the public debt was monetized (Ch. 4). The latter ensured that domestic credit creation was closely linked to the public sector borrowing requirements which, given the former, led to excessive credit expansion.

The monetization of the public debt, of course, stemmed from the interest rate policy of the Government. It was shown in Ch. 4 that the hallmark of the country's interest rate policy was the fixing of various interest rates at apparently sub-equilibrium levels. The reasons given for the low interest rate structure were the desire to keep down the cost of government borrowing and to stimulate investment. The explanations were shown to be untenable because, among other things, (i) when the Government did not need to borrow (roughly from 1972) and was indeed a net creditor to the banking system, interest rates were not de-regulated. Instead, they were revised downward in 1975: the minimum lending rate from 4½ to 3½%; the Treasury Bill issue rate from 4 to 2½%; and commercial bank lending rates from a range of 7 - 12 to 6 - 9% p.a. Yet, the annual rate of inflation for the year was 33.7%. All interest rates in the economy were therefore below the inflation rate as they were during most of the review period. (ii) The ability of low interest rates to stimulate investment is questionable.

The consequences of administering interest rates are clear: the effectiveness of monetary policy is reduced. Interest rates can no longer act as indicator or target of monetary policy. Of greater significance is the fact that as the authorities were not prepared to let interest rates rise to the level that would make the holding of government securities attractive to the public, it was difficult to find willing buyers of the assets. The Central Bank then found itself the major purchaser of what it set out originally to sell. Given this monetization of the public debt, government expenditure had the effect of expanding the domestic component of the monetary base which the Central

Bank could therefore not control effectively. A direct consequence of increasing government expenditure then was the expansion of the money stock. By raising aggregate demand, this contributed to the inflationary process and the balance of payments difficulty, hence the conclusion in Chs. 5 and 6 that a solution to these problems would require the control of government expenditure in general and the fiscal deficit in particular.

When interest rates are pegged, the money stock is determined endogenously, the most important factors being the fiscal deficit and reserve flows which can no longer be sterilized. Therefore, had the government followed a more flexible interest rate policy, the scope for monetary policy would have been wider as some hitherto inapplicable weapons (e.g. open market operations) become feasible, thus enabling the monetary authorities to exercise greater control over the money stock.

Interest rate policy was not the only weapon which was misapplied. The case for the inappropriateness of the government's exchange rate policy was argued in Ch. 6. The main weakness of the policy was the apparent overvaluation of the currency with inefficient direct fiscal measures being used to prop up its value at above-equilibrium levels. But such policies were doomed to fail as they did; such measures did not go to the root of the problem which was a fundamental disequilibrium in the balance of payments and so could not find lasting solutions. The government thus failed to use the opportunity of the Mid-1970's (when it accumulated a historically high level of foreign exchange reserves) to attempt a trade and exchange liberalization which would have reduced the level of control-induced inefficiency in the economy.

7.2 ABSENCE OF AN ARTICULATED MACROECONOMIC STRATEGY

Another major weakness of macroeconomic policy in Nigeria is that the government did not appear to have a coherent policy. Instead, it seemed to have adopted an ad hoc attitude to economic policy by tackling problems as they arose without any clear long-term plan or guiding principles. This can be illustrated best by drawing an analogy between the periods 1948 - 54 and 1973 - 76. During both periods, the resources available to the government increased beyond any previous realistic expectations. In both periods, too, the source of the unprecedented growth was the export sector. Therefore, there was (relatively speaking) a massive net inflow of foreign exchange assets. But here the similarities end. In the former case, the export sector was indigenous; in the latter it was largely foreign-owned and controlled. In the one case (1948 - 54) foreign exchange was accumulated rather than spent. Foreign reserves were invested in overseas assets which yielded interest in addition to the principal thus increasing the value of the public saving. In subsequent years, when the market for the country's export commodities became depressed, the government fell back on its accumulated external reserves. Although the original objective of using the accumulated surpluses of the marketing boards to stabilize the prices received by the producers was eventually abandoned, the result nevertheless was the availability of resources in difficult times.

In the other case, the position was radically different. As more resources became available, planned expenditures were progressively revised upward while increasingly more ambitious projects, the economic justification of which was dubious, were

undertaken as shown in Ch. 2. The size of the public sector investment programmes under the Second National Development Plan 1970 - 74, was doubled as a result of the unexpected improvement in the Government's financial position; the size of public sector commitment under the Third Plan 1975 - 80 was over seventeen times that of the Second Plan and yet the two were separated by a space of only five years. But as shown in Ch. 2, these expectations proved to be too optimistic and drastic, panic measures had to be instituted from 1978. In other words, the Government failed to provide for the rainy day as it did in the 1950's. The particular case of the absence of an external reserve policy was demonstrated in Ch. 6.

Some consequences of the absence of a consistent macroeconomic strategy were pointed out in the text, especially in Chs. 2 and 6. They include the following. When revenue is spent as it is earned under the guise of the drive toward accelerated economic growth; (i) there is little time for adequate feasibility studies of the projects concerned; as a result, some unviable projects are started and others which are white elephants (and would not have been contemplated upon in normal times) are also executed; (ii) the increase in government resources may be temporary, thus resulting in projects being abandoned for insufficiency of resources; and (iii) the recurrent component of public outlays which is more difficult to reduce than the capital component is given a boost. By flushing external reserves down the import drain as soon as they were earned, the government raised the flow of imports above sustainable levels. The link between import and export was of course due largely to the use of an annual foreign exchange budget by the government.

7.3 STRUCTURAL AND OTHER CONSTRAINTS

Although the authorities contributed considerably to the relative ineffectiveness of macroeconomic policy as seen above, some circumstances were beyond their control. But even here they are partly to blame: an adequate allowance was not made for the limitations of policy imposed by external factors. The constraints are those created by the structure of the economy and the financial system as discussed at length in Chapter four. Specific examples may help to clarify the point.

It was explained that, as in most developing countries, a capital goods industry is virtually non-existent which implies that these goods have to be imported. Furthermore, the bulk of raw materials is imported. Given a negligible short-run response of agriculture, the mainstay of the Nigerian economy, an expansionary policy is unlikely in the short-run to lead to an increase in employment and output. The effect of such a policy is more likely to be split between a deterioration in the balance of payments and a rise in the price level, the proportion being determined by the initial level of foreign reserves and how far the authorities are prepared to let it fall. Similarly, the response of the level of activity in the petroleum sector (which dominates the current account of the balance of payments, and government revenue) to domestic policy is minimal. Finally, given the low level of linkages between the various sectors of the economy, the effect of government policy on one sector, say, agriculture, is not easily transmitted to the rest of the economy. What all this implies is that traditional cures to short-run macroeconomic problems are not directly applicable in Nigeria.

In particular, output is not an increasing function of government expenditure.

A second structural limitation on policy concerns the financial system. In Ch. 4 it was shown that the financial markets are highly imperfect. They are fragmented and dominated by a few commercial banks while some important institutions are either absent or at very early stages of development (e.g. discount houses and building societies). These imperfections led the Government to regulate the stock exchange closely, thus contributing to the imperfection. Consequently, these markets cannot act as reliable guide for economic policy. The administration of interest rates discussed above helps to increase the degree of imperfection.

7.4 CLOSING REMARKS

The argument advanced in this thesis is that the ineffectiveness of macroeconomic policy in Nigeria is attributable to excessive growth of public expenditure, the monetization of the public debt, and the structure of the economy. But the lion share of the blame goes to the first two factors. Therefore, in order to improve the performance of policy, it is necessary to (1) curb the growth of government expenditure and (2) de-monetize the public debt by giving the monetary authorities the power to determine what proportions of the fiscal deficit should be financed by new issues of money and by bonds.

APPENDIX 1

THE NIGERIAN ECONOMY 1960 - 81

INTRODUCTION

This appendix is designed to describe some features of the Nigerian economy which were used repeatedly in the text. The emphasis is on the quality of the database and the structure of the economy.

1. POPULATION

The true population of Nigeria is not known although censuses have been held at different times in the past - in 1911, 1921, 1931, 1962, 1963 and 1973. The 1931 census, for example, put the population at 20 m. But this was not a proper census. Full enumeration was carried out in a highly restricted number of places. The population estimates were based mainly on tax records of adult males (Ekanem, 1972, p. 40). The 1952 - 53 census yielded an estimated population of 31.5 m. Again the census was not properly conducted, being spread over four years (1950 - 53). (Aluko, 1965, p. 376). The regional estimates were therefore likely to contain some inaccuracies. To complicate matters further, individuals were suspicious of the motives of the census. While some believed that the census data were to be used as a means of collecting heavier taxes and providing names for military service, others objected to the counting of their wives and children for fear of famine, ill-luck or other misfortune (Ekanem, 1972, pp. 41 - 42). The results were therefore subject to underestimation.

But in the 1960's, attitudes towards population underwent a radical change as a result of the politicization of population statistics from 1954. When federal government was established in that year, population was made the basis of political representation at the federal, regional and local government council levels; social services, the location of key industries, the allocation of federal revenues and the distribution of other government amenities also came to be based on population. These were the aspects that were stressed by politicians on the campaign that preceded the 1962 census. As a result, individuals became overenthusiastic to be enumerated and made sure they were counted at least once in their districts of origin irrespective of their place of residence. As the actual count took place between 13 and 27 May, there was sufficient opportunity for double-counting. Furthermore, the Federal Census Officer in his report on the census complained of inflation of figures for certain parts of the country where increases of 100 - 120% over the 1953 figures were recorded (Nigeria, 1963). When the provisional figures were released, it was clear that the population of the North was lower than that of the East and West combined. A supplementary count was then ordered which resulted in the addition of 9 m to the figures for the North (Ekanem, 1972, p. 44). Also, whole villages which had never been counted before were 'discovered' while certain areas allegedly included their cattle population in their figures. (Kirk-Green and Rimmer, 1981). Following the controversy that ensued, the results were scrapped.

The results of the repeat exercise of 1963 were also greeted

with a great deal of controversy. The total population was put at 55.7 m. This gives an annual rate of growth between 1953 and 1963 of 6%. Either the former was underestimated or the latter was overestimated.

A census held in November 1973 was cancelled because the nation could not agree on the distribution of the population which was put at slightly under 80 m. Thus, despite the doubts on the 1963 census data (the Eastern and Mid Western Regions rejected them and the East even took the case to the Supreme Court but lost because the latter argued it had no authority to entertain the suit),they continued to be the latest available.

2. EMPLOYMENT

As stated in the text, the rate of employment is a foreign term in Nigeria as the basic statistics do not exist.

3. OUTPUT

3.1 MEASUREMENT PROBLEMS

The problems of valuing output are well known and for a developing economy such as Nigeria's, they assume an even greater dimension. The problem peculiar to the measurement of income in developing countries are well documented in the literature (e.g. Samuels (1963), esp. the article on Nigeria by Okigbo (1963); also Prest and Stewart (1953) and Okigbo (1957)).

The major source of the specific problems of national income

accounting in Nigeria is the quantitatively very significant 'Crops grown for domestic use' component (Berry and Liedholm, 1970, p. 81), sometimes called subsistence production which, by definition, is not traded. Even though the relative importance of this sector has been declining, with the progressive monetization of the national economy, it is still high and, in any case, the rate of decline is not known.

With the exception of marketing board purchases (of export crops), most estimates of agricultural production are based on an assumed output per man. Clearly, this quantity is highly subjective while the population itself is unknown.

Apart from the mining, financial and, to some extent, the manufacturing sectors, the output of the other sectors is also difficult to measure. The existence of a large informal sector (defined in Ch. 4) renders the valuation of manufacturing output more difficult than one would think.

Ultimately, the special problems of measuring the national income of Nigeria reduce to the non-availability of relevant data. Even where some data is available, it may not be reliable or timely. This applies especially to official statistics. Many factors contribute to this situation :

> 'Not only is false information gathered as a result of misunderstandings, fear of tax authorities, uncertainty about or dislike of government interference and the desire to mislead competitors, but also information may be carefully falsified as a result of official corruption which is so incredibly common, official negligence or simple inexperience of reporting officers'
>
> (Eke, 1966, p. 337)

One may also add the desire to make data conform to expectations

or theory in order to make it look respectable.

The foregoing discussion implies that the national income estimates of Nigeria may be subject to a wide margin of error. In particular, given the discussion of population statistics above, the use of per capita income is highly questionable.

The first attempt at valuing the national income of Nigeria was made by A.R. Prest and I.G. Stewart (Prest and Stewart, 1953). This covered the year 1950 - 51 undertaken by E.F. Jackson and P.N.C. Okigbo (1962). The Federal Office of Statistics has published regular annual national accounts statistics since 1958.

3.2 STRUCTURE OF OUTPUT

Despite the errors all the estimates of the GDP inevitably contain, there is little doubt that the Nigerian economy is predominantly agricultural. The 1950 estimate by Prest and Stewart shows that agriculture (defined to include Farm Crops (₦591.8 m), livestock products (₦61 m), Forest Products (₦149.8 m), and Fishing (₦12.6 m))contributed ₦815.2 m to the GDP of ₦1193.4 m. The share of agriculture in total output was therefore slightly over 68%. Subsequent estimates accorded agriculture that primary of place, although its share in total product has been declining continuously.

The contribution to the GDP of the three largest sectors of the economy are set out in Table A-1. That of the manufacturing sector is also included for the sake of comparison. The table

shows that agriculture was not displaced until 1974 when its share fell to 26.5% while that of the mining sector rose to 32.6% and that this situation persisted in some later years. However, this impressive performance is due to some extent to the rapid rise in price in the oil sector from 1973. Thus, when the GDP is expressed in terms of 1973 factor cost, the respective shares of agriculture and mining become 26.4% and 18.4%. The relative importance of these sectors warrant a closer look at them.

3.2.1 AGRICULTURE

The second National Development Plan (1970 - 74) recognizes the fact that 'agriculture is still the mainstay of the Nigerian economy' (Nigeria, 1970, p. 103). Its overall importance in the economy is greater than its share in the GDP would suggest. In addition to providing the main food requirements of the country and inputs for the other sectors, notably the industrial sector (e.g. tobacco and cotton), it is the source of employment for the bulk of the people. The proportion of the labour force dependent on agriculture was put at over 80% in 1962 (Nigeria, 1962, p.) and over 70% in 1970 (Nigeria, 1970, p.) Also taxes on agriculture constituted a significant fraction of government revenue. Finally, agriculture provided the foreign exchange earnings that helped the development of the economy in the 1950's and 1960's. Before the advent of crude petroleum as the major earner of foreign exchange in the early 1970's. over 80% of Nigeria's exports consisted of agricultural products.

Agricultural production in Nigeria, whether for exports or domestic consumption, is organized on a small-holding, peasant basis. Its chief characteristic is low output per man and little monetary input. The subject is often discussed in terms of production for export and for home use. Invariably, attention is focused on the former category as 'nobody really knows the size of the subsistence output in Nigeria, whether in absolute value in a particular year or its movement through the years' (Aboyade, 1969, p. 140). Yet its share in total output is probably in excess of 85% (Stewart, 1961, p. 19).

3.2.1.1 AGRICULTURAL EXPORTS

The fate of agricultural exports is depicted in Tables ~~A-2 and~~ A-6.1. Groundnuts and palm products exhibit the most dramatic changes. Until 1972, the country was the leading producer in Africa and the largest exporter in the world of groundnut. Production has been hampered by such factors as virus diseases, pest invasion, drought, smuggling and competition from other crops. Export has been suspended since 1975.

Growing domestic consumption and falling output are largely to blame for the decline of palm oil products. Export of palm oil has been banned since 1978 because of shortages at home. Figures in the table after that date refer to palm kernels.

Cocoa is the only agricultural product that has no firm domestic market and this partly accounts for its survival.

TABLE A-2 : EXPORTS OF PRINCIPAL AGRICULTURAL PRODUCTS, '000 TONNES

COMMODITY	1950	1960	1968	1974	1980
GROUNDNUTS	421	379	918	114	-
COCOA	100	154	206	179	167
OIL PALM PRODUCTS	583	601	162	18.4	49.6
BENISEED	14	27	14	0.3	-
COTTON	13	27	13	-	2.4
RUBBER	14	57	52	3.3	31
TOTAL AGRICULTURE EXPORT AS % OF TOTAL	88.3	82.1	62.4	4.7	2.4

SOURCE : CBN, ECONOMIC AND FINANCIAL REVIEW; ANNUA REPORTS

3.2.1.2 AGRICULTURE AND GOVERNMENT REVENUE

Agricultural production for export was an important source of revenue for the government, especially in the years 1950 - 62. The government obtained revenue from this source in two ways : direct taxation of the commodities and the pricing policy of the commodity , marketing boards which were set up originally as a means of controlling the marketing of agricultural exports. The boards, however, adopted the policy of keeping the prices they paid to the producers below the world market prices. The surpluses generated in this way initially were intended for stabilizing producer prices in the facing of fluctuating world prices, thus insulating the producers from the direct effects of changes in world prices. As a proportion of world prices, producer prices ranged from 15.8% for cotton in 1950 to 87%

for palm oil in 1954 between 1950 and 1961 (Onitiri and Olatunbosun, 1974, p. 182). In time the original objective was abandoned and the surpluses were used to finance development (Helleiner, 1964; 1966). Thus, in 1954, following the constitutional developments of that year, the marketing boards which had been organized on a national, commodity basis were regionalized and their surpluses distributed to the regional governments.

In addition to these deductions, a produce purchase tax was imposed on agricultural exports from 1953.

3.2.1.3 LINKAGES WITH THE REST OF THE ECONOMY

With the exception of the use of cotton and tobacco in the textile and tobacco industries respectively, Hirschman-type linkages (Hirschman, 1958; 1977) are largely absent.

3.2.2 THE MINING SECTOR

Two characteristics of this sector which were used extensively in the text need to be emphasized here. These are its phenomenal growth in the 1970's and the fact that it is the sector with the weakest linkages with the rest of the economy.

The main item in this sector is crude petroleum. Other minerals - tin ore, columbite and coal - which were produced in commercial quantities until the mid-1960's have ceased to be of any importance. By the end of the 1970's they had virtually disappeared from the export list. For example, in 1980, the export of tin and columbite amounted to ₦9.8 m and ₦0.9 m respectively and no

coal was exported. Total export stood at ₦14,077 m (CBN, Report, 1980, p. 89). Consequently, only crude petroleum is considered.

Oil was first produced in commercial quantities in 1958 when its export amounted to ₦1.8 m or 0.7% of total export. Production was hampered by the civil disturbance but picked up in 1969. In that year an annual rate of growth of export by value of 237.6% was recorded. The corresponding figure was 183% in 1974 and 88% in 1979. These increases were aided by the price increases that started from November 1973. The increases amounted to 61, 183 and 88% in 1973, 1974 and 1979 respectively. As a result, the value of exports rose from ₦1893.5 m in 1973 to ₦5365.7 m in 1974 and to ₦13,523 m in 1980. (Sule, 1982, Tables 1, 2 and 3).

These developments enabled the sector to dominate all others in many respects. Its temporary displacement as the largest component of the GDP has already been mentioned. In 1965 the share of oil in total export was 25.4%. It increased to 73.6% in 1971. Since 1972 it has not been less than 82% and stood at 98.2% by 1981. Finally, it occupies a dominant position with respect to the revenue collected by the Federal Government. Its supremacy in this sphere has remained unchanged since 1972 as Table A-3 shows.

Despite the significance of the mining sector, it constitutes an essentially enclave economy within the national economy. The term as used here is usually applied to the mining sector of developing countries and may be defined as one whose impact

on the disposable income of the nationals, other than the indirect effects of the expenditure of government revenue obtained from it, is relatively insignificant (Bosson and Varon, 1977, p. 101; Emerson, 1982, p. 561; Gillis et al, 1978, pp. 6 - 8). In particular case of Nigeria, it has been asserted that

> 'Its development, growth and expansion were not determined by endogenous economic forces but by the market forces operating externally. The productive organizations are all multinational corporations with similar and identical interests elsewhere and all over the world. The investment requirements of this giant sector are not met from the aggregate monetary resources of the domestic economy'
>
> (Okigbo, 1981, p. 14)

The bulk of crude oil in Nigeria is always exported. The entire output was exported until 1964 when the first refinery started production. The proportion of crude oil deliveries to the refinery to total output was under 3% until 1978, with a second refinery. Even with the opening of a third in 1980, the ratio still remained under 7% (Sule, 1982, p. 15). In addition to the absence of significant forward linkages, backward linkages are also weak. This mainly is because the industry is highly capital-intensive and requires correspondingly skilled labour - two inputs that are not readily available locally. Thus, 'the know-how, machinery and equipment and most of the managerial personnel in use in the industry are imported wholesale' (Sule, 1982, p. 19). According to Iwayemi, the sector employs less than 0.1% of the labour force. Furthermore, 'if government-related payments are excluded, local payment (by the industry) is less than 0.05% of the total expenditure' (Iwayemi, 1981,

p. 13).

The oil industry is regarded as an enclave not just because of its low linkages alone, it is insensitive to domestic policy in another sense. Prior to the formation of OPEC in 1960,

> 'the oil companies fixed the quantity of oil to be produced and fixed and varied the prices at which the oil was sold with utter disregard of the interests of the host countries'
>
> (Nwankwo, 1982, p. 6).

One objective of OPEC which is relevant for the present purpose is the co-ordination and unification of the petroleum policies of member states. In 1970, this objective was broadened to include a minimum income tax rate of 55%, the elimination of existing disparities in posted prices and the maintenance of uniform increases in posted prices. Nigeria joined this organization in 1971. Before then the country had relied on the most favoured nation principle by which the best terms offered to any oil producing and exporting country became applicable to Nigeria automatically (Lolomari, 1976). But when the country joined OPEC in July 1971 it was obliged to implement the organization's decisions. Now it is common knowledge that these decisions include the rate of production and the quantity and prices of exports.

3.2.3 THE MANUFACTURING SECTOR

As is evident from Table A-1, this sector is very small. It is also characterized by the predominance of light consumer goods and assembly. Consequently, value-added is relatively low.

4. PUBLIC FINANCE

Since the government itself generates government finance statistics one would have expected these to be the most reliable sets of statistics. In practice this is not so. The three levels of government are required by law to present details of their financial operations. But this often takes a long time to materialize if it ever does.

The situation is even worse for the states. Since the creation of new states in 1976 many states have not published their accounts while some had even ceased publication before then. The Central Bank often has to rely on newspaper publications for compiling data on state budget estimates which should have been ready by the beginning of the financial year (see, for example, CBN, Report, 1980, p. 77).

Data on local government council finances are virtually unavailable outside the ministries responsible for them in each state.

In its report submitted to the government in 1980, the Presidential Commission on Revenue Allocation notes that

> 'Even the figures that relate to governmental operations are hard to come by. Some states have not published their audited accounts for several years. There are many that do not even have the report of their Accountants-General ... It is difficult in these circumstances to analyze government accounts of revenue and expenditure'
>
> (Nigeria, 1980, p.).

This was one of the reasons for restricting the analysis in the text to Federal Government finance.

4.1 FEDERAL GOVERNMENT REVENUE

The growth of government revenue in the 1960's was unexceptional. But in the 1970's considerable changes occurred. In 1970 revenue increased by 67% over the level in the preceding year. The corresponding figure was 167% in 1974. This was due to the unprecedented growth in revenue from oil in that year. Aside from the spurt of 46% in 1979 and 40% in 1980, the rest of the review period saw a deceleration in the rate of centrally-collected revenue which declined absolutely from 1981 onward.

A characteristic feature of government revenue in Nigeria is the predominance of a few revenue sources. In the 1950's and 1960's taxes on production and expenditure provided the bulk of the revenue. As Table A-3 shows, indirect taxes (import, export and excise duties) as a ratio of total revenue never fell below 60% (from 1852) until 1970 when it stood at 58.3%. The decline from that year was due to the influence of oil. The main item in indirect taxes is import duties which alone accounted for 53.8% of total revenue in 1961.

By comparison, direct taxes were unimportant before 1970. The rise since then owes to the tremendous growth in petroleum profits tax. Income taxes were particularly small relative to total revenue. Non-tax revenue was also insignificant until the rise of mining rents, royalties and fees (which constituted the bulk of this class of revenue) in the 1970's.

In sum, the country depended heavily on indirect taxes in general

and taxes on external trade in particular until 1970 when petroleum-derived taxes took over the lead. More details are available in Tables A-3 and 2.1.

4.2 FEDERAL GOVERNMENT EXPENDITURE

The trend in expenditure over the review period was similar to that in revenue as Table 2.1 shows.

The composition of expenditure displays some distinctive features. First, current expenditure as a proportion of the total rose from 58.9% in 1961 to its maximum of 77.1%. The rise in the relative importance of current expenditure during this time is partly explained by the political crises of the period when the share of defence in the total rose sharply. The ratio declined to 26.7% in 1977 before settling at 45.3% in 1983. The fall over this period may be attributed to the de-mobilization of the Armed Forces and the launching of the three developments plans referred to in Ch. 1.

The shortfall in revenue which became particularly acute in 1978 led to a decline in total expenditure. The brunt of the fall was borne by capital expenditure which more easily could be cut back.

The second feature of the expenditure pattern relates to the distribution of current and capital expenditure. The share of administration (mainly defence and security) in total expenditure rose from 31.9% in 1961 to 72% in 1970 before declining

to 31.4% in 1983. Its share in current expenditure was 43.2% in 1961, 73.1% in 1972 and 48.6% in 1983. The shares of the other sectors were correspondingly small. The distribution of capital expenditure is similar except that expenditures on economic services usually take the lion share. Social services expenditure are on health and education while transfer payments consist only of interest on the public debt and pension of retired Federal Government employees.

The expenditure pattern is depicted in Tables A-4 and A-5. What emerges from the tables is that administration accounts for a large fraction of total expenditure. Yet, administration is, in essence, equivalent to defence and security. Furthermore, owing to the universal secrecy surrounding defence spending, actual figures may diverge from those reported. In the case of Nigeria, the Central Bank has heightened the suspicion of the accuracy of published statistics by qualifying the data on defence with 'recorded'. This gives the impression that the data is not altogether reliable and if this is so, in the absence of any other evidence, the situation may be taken to be that of under-reporting in view of the criticism of the military governments of the time for overspending on defence relative to other services. Now, as it is well known, defence expenditures constitute one of the most 'barren' classes of expenditure.

5. EXTERNAL TRADE

The foreign trade sector provided the main stimulus of growth in the 1950's and early 1960's (Aboyade, 1966, p. 2). Also,

the operations of the West African Currency Board made the money supply entirely dependent on the balance of payments. As well as generating income in the domestic economy exports earned the foreign exchange that was used to finance imports.

Nigeria is an open economy whose transactions with the rest of the world constitute a significant proportion of aggregate economic activity. The ratio of exports to the GDP rose from 13.1% in 1950 to 15.1% in 1960, 31.1% in 1974, 32.5% in 1980 and declined to 23% in 1981. The corresponding figures for imports were 9, 19.2, 9.3, 22.3 and 26.4%. The ratio of total trade to the GDP thus ranged from 22.1% in 1950 to 54.8% in 1980.

A consequence of this increasing openness of the economy is that it was becoming ever more sensitive to developments outside the country. Unless some form of sterilization policy was pursued in those circumstances, the level of economic activity would tend to follow the tempo of economic activity in the rest of the world.

5.1 STRUCTURE OF FOREIGN TRADE

5.1.1 EXPORTS

Nigeria is a classical example of a primary product exporting country. In the 1950's, the bulk of its exports consisted of agricultural products. By 1961 agricultural exports still accounted for 89% of all exports. Non-agricultural exports rose to a position of importance only with the production of

crude petroleum in commercial quantities from the mid-1960's. A number of commodities notably cocoa, groundnuts (peanuts), palm oil and kernels, cotton and rubber - dominated Nigeria's exports. Although the country was the world's leading exporter of groundnut, palm kernels and columbite, the second largest exporter of cocoa, and an important exporter of palm oil, rubber and tin, it did not depend on any one single item to any significant degree as it now does on oil. Table A-6 and A-7 illustrates the nearly complete demise of the non-oil export sector.

5.1.2 IMPORTS

The significant point to note about imports over the review period is its changing structure. The ratio of consumer goods to total imports declined from 56% in 1960 to 39.6% in 1980 and rose to 44.4% in 1981. That of producer goods (capital goods and raw materials) rose from 43% in 1960 to 71.4% in 1977 before declining to 55.5% in 1981 (see Table 6.2).

The structural change is due in a large measure to the import substitution development strategy explained in Ch. 6. The fall in the relative importance of producer goods from 1977 is not unconnected with the balance of payments problems of the time. It is much easier to reduce the import of capital goods than it is to curtail that of consumer goods, some of which may be regarded as 'essential commodities'.

TABLE A - 1 THREE COMPONENTS OF THE GDP

	MILLION NAIRA			% OF THE TOTAL		
	AGRIC ULTURE	MINING	MANU-FACTUR-ING	AGRIC	MINING	MANU.
1959	1283.6	22.0	95.6	63.7	1.1	4.7
1960	1414.6	26.0	107.6	62.9	1.2	4.8
1961	1453.2	42.6	123.4	61.5	1.8	5.2
1962	1605.8	54.0	146.4	61.8	2.1	5.6
1963	1673.8	54.8	163.0	61.0	2.0	5.9
1964	1676.4	73.2	173.6	58.0	2.5	6.0
1965	1691.6	143.0	214.6	54.4	4.6	6.9
1966	1855.0	163.0	233.0	55.0	4.8	6.9
1967	1528.0	104.0	194.0	55.5	3.8	7.1
1968	1415.0	72.0	199.0	53.3	2.7	7.5
1969	1712.0	265.0	282.0	48.2	7.5	7.9
1970	2576.0	534.0	378.0	48.8	10.1	7.2
1972	3093.0	1220.0	511.0	43.0	17.0	7.1
1973	3369.0	2021.0	497.0	30.0	18.0	4.4
1974	4942.0	6087.0	661.0	26.5	32.6	3.5
1975	5873.0	4668.0	1170.0	27.4	21.7	5.5
1976	6783.0	6797.0	1464.0	24.8	24.9	5.4
1977	8074.0	7905.0	1555.0	25.2	24.7	4.9
1978	8339.0	8416.0	1785.0	24.8	25.0	5.3
1979	8981.0	11339.0	2037.0	22.5	28.4	5.1
1980	9620.0	11614.0	2354.0	22.1	26.8	5.4
1981	10138.0	8997.0	2648.0	23.3	20.7	6.1

SOURCE : FEDERAL OFFICE OF STATISTICS, ANNUAL ABSTRACT OF STATISTICS 1964 - 1979; GROSS DOMESTIC PRODUCT OF NIGERIA APRIL 1982.

TABLE A-3 **CURRENT EXPENDITURE, MILLIONS OF NAIRA**

YEAR	ADMINI-STRATION	ECONOMIC SERVICES	SOCIAL SERVICES	TRANSFER PAYMENTS	TOTAL
1961	42.7	14.2	22.3	19.7	98.9
1962	40.6	13.0	21.8	28.0	103.4
1963	45.6	12.1	21.2	40.8	119.7
1964	63.8	28.1	19.0	31.7	142.6
1965	65.0	33.9	20.1	37.9	156.9
1966	78.1	25.8	18.2	55.2	177.3
1967	73.6	20.0	20.3	52.9	166.8
1968	125.8	17.6	13.5	59.9	216.8
1969	173.1	22.6	12.2	79.1	287.0
1970	458.8	24.3	16.6	138.6	638.3
1971	338.4	31.4	20.4	102.6	492.8
1972	498.4	46.2	29.4	107.4	681.4
1973	454.3	52.4	31.1	106.6	644.4
1974	555.4	74.4	94.9	148.9	873.6
1975	1055.4	131.8	287.5	211.2	1685.9
1976	1012.2	141.8	634.6	383.8	2172.4
1977	1040.4	191.8	368.4	221.7	1822.3
1978	1259.5	206.3	529.6	899.7	2895.1
1979	999.5	113.4	511.0	735.7	2359.6
1980	1944.6	354.6	883.7	3240.1	6423.0
1981	2143.8	484.9	984.9	1463.9	5077.5
1982	2174.1	431.4	986.1	1267.9	4859.5
1983	2567.9	380.0	904.4	1426.5	5278.8

SOURCES OF TABLES A-3 - A-8:

CENTRAL BANK OF NIGERIA, ECONOMIC AND FINANCIAL REVIEW, VARIOUS ISSUES

TABLE A-4 **FEDERAL GOVERNMENT CAPITAL EXPENDITURES IN MILLIONS OF NAIRA**

YEAR	ADMINI-STRATION	ECONOMIC SERVICES	SOCIAL SERVICES	TRANSFER PAYMENTS	TOTAL
1961	10.2	39.6	11.4	5.9	67.1
1962	16.3	34.1	10.0	3.5	63.9
1963	20.5	33.7	8.2	1.5	63.9
1964	24.9	40.0	9.9	0.9	75.7
1965	23.1	43.6	9.4	3.5	79.6
1966	19.3	44.8	9.8	3.9	77.8
1967	38.1	48.9	4.2	0.1	91.3
1968	68.9	46.3	2.1	7.2	124.5
1969	60.0	27.3	2.0	2.3	91.6
1970	145.0	43.4	3.2	9.0	200.6
1971	63.2	58.2	13.2	11.6	146.2
1972	108.8	132.9	42.0	12.2	295.9
1973	133.8	249.5	40.4	11.4	435.1
1974	268.3	466.1	358.1	131.0	1223.5
1975	747.8	1314.7	927.4	217.8	3207.7
1976	795.4	2231.4	889.7	144.8	4061.3
1977	1013.4	3124.6	824.9	41.7	5004.6
1978	989.9	2949.9	1090.8	61.7	5092.3
1979	769.5	2812.1	613.3	24.7	4219.6
1980	1288.4	5059.9	1712.7	30.7	8091.7
1981	720.1	3629.4	1299.0	50.8	5699.3
1982	930.6	5217.9	1285.1	85.4	7519.0
1983	1098.2	4212.3	1026.5	48.8	6385.8

TABLE A-5 **FEDERAL GOVERNMENT EXPENDITURE, MILLIONS OF NAIRA**

YEAR	ADMINI-STRATION	ECONOMIC SERVICES	SOCIAL SERVICES	TRANSFER PAYMENTS	TOTAL
1961	52.9	53.8	33.7	25.6	166.0
1962	56.9	47.1	31.8	31.5	167.3
1963	66.1	45.8	29.4	42.3	183.6
1964	88.7	68.1	28.9	32.6	218.3
1965	88.1	77.5	29.5	41.4	236.5
1966	97.4	70.6	28.0	59.1	255.1
1967	111.7	68.9	24.5	53.0	258.1
1968	194.7	63.9	15.6	67.1	341.3
1969	233.1	49.9	14.2	81.4	378.6
1970	603.8	67.7	19.8	147.6	838.9
1971	401.6	89.6	33.6	114.2	639.0
1972	607.2	179.1	71.4	119.6	977.3
1973	588.1	301.9	71.5	118.0	1079.5
1974	823.7	540.5	453.0	279.9	2097.1
1975	1803.2	1446.5	1214.9	429.0	4893.6
1976	1807.6	2373.2	1524.3	528.6	6233.7
1977	2053.8	3316.4	1193.3	263.4	6826.9
1978	2249.4	3156.2	1620.4	961.4	7987.4
1979	1769.0	2925.5	1124.3	760.4	6579.2
1980	3233.0	5414.5	2596.4	3270.8	14514.7
1981	2863.9	4114.3	2283.9	1514.7	10776.8
1982	3104.7	5649.3	2271.2	1353.3	12378.5
1983	3666.1	4592.3	1930.9	1475.3	11664.6

TABLE A-6 COMPOSITION OF CURRENT EXPENDITURES, PERCENTAGE SHARES

YEAR	ADMINI-STRATION	ECONOMIC SERVICES	SOCIAL SERVICES	TRANSFER PAYMENTS	TOTAL
1961	43.2	14.4	22.5	19.9	100.0
1962	39.3	12.6	21.1	27.1	100.0
1963	38.1	10.1	17.7	34.1	100.0
1964	44.7	19.7	13.3	22.2	100.0
1965	41.4	21.6	12.8	24.2	100.0
1966	44.0	14.6	10.3	31.1	100.0
1967	44.1	12.0	12.2	31.7	100.0
1968	58.0	8.1	6.2	27.6	100.0
1969	60.3	7.9	4.3	27.6	100.0
1970	71.9	3.8	2.6	21.7	100.0
1971	68.7	6.4	4.1	20.8	100.0
1972	73.1	6.8	4.3	15.8	100.0
1973	70.5	8.1	4.8	16.5	100.0
1974	63.6	8.5	10.9	17.0	100.0
1975	62.6	7.8	17.1	12.5	100.0
1976	46.6	6.5	29.2	17.7	100.0
1977	57.1	10.5	20.2	12.2	100.0
1978	43.5	7.1	18.3	31.1	100.0
1979	42.4	4.8	21.7	31.2	100.0
1980	30.3	5.5	13.8	50.4	100.0
1981	42.2	9.5	19.4	28.8	100.0
1982	44.7	8.9	20.3	26.1	100.0
1983	48.6	7.2	17.1	27.0	100.0

TABLE A-7 **COMPOSITION OF CAPITAL EXPENDITURE, PERCENTAGE SHARES**

YEAR	ADMINI-STRATION	ECONOMIC SERVICES	SERVICES	TRANSFER PAYMENTS	TOTAL
1961	15.2	59.0	17.0	8.8	100.0
1962	25.5	53.4	15.6	5.5	100.0
1963	32.1	52.7	12.8	2.3	100.0
1964	32.9	52.8	13.1	1.2	100.0
1965	29.0	54.8	11.8	4.4	100.0
1966	24.8	57.6	12.6	5.0	100.0
1967	41.7	53.6	4.6	0.1	100.0
1968	55.3	37.2	1.7	5.8	100.0
1969	65.5	29.8	2.2	2.5	100.0
1970	72.3	21.6	1.6	4.5	100.0
1971	43.2	39.8	9.0	7.9	100.0
1972	36.8	44.9	14.2	4.1	100.0
1973	30.8	57.3	9.3	2.6	100.0
1974	21.9	38.1	29.3	10.7	100.0
1975	23.3	41.0	28.9	6.8	100.0
1976	19.6	54.9	21.9	3.6	100.0
1977	20.2	62.4	16.5	0.8	100.0
1978	19.4	57.9	21.4	1.2	100.0
1979	18.2	66.6	14.5	0.6	100.0
1980	15.9	62.5	21.2	0.4	100.0
1981	12.6	63.7	22.8	0.9	100.0
1982	12.4	69.4	17.1	1.1	100.0
1983	17.2	66.0	16.1	0.8	100.0

TABLE A-8 **COMPOSITION OF TOTAL EXPENDITURES, PERCENTAGE SHARES**

YEAR	ADMINI-STRATION	ECONOMIC SERVICES	SOCIAL SERVICES	TRANSFER PAYMENTS	CURRENT EXPEND.
1961	31.9	32.4	20.3	15.4	59.6
1962	34.0	28.2	19.0	18.8	61.8
1963	36.0	24.9	16.0	23.0	65.2
1964	40.6	31.2	13.2	14.9	65.3
1965	37.3	32.8	12.5	17.5	66.3
1966	38.2	27.7	11.0	23.2	69.5
1967	43.3	26.7	9.5	20.5	64.6
1968	57.0	18.7	4.6	19.7	63.5
1969	61.6	13.2	3.8	21.5	75.8
1970	72.0	8.1	2.4	17.6	76.1
1971	62.8	14.0	5.3	17.9	77.1
1972	62.1	18.3	7.3	12.2	69.7
1973	54.5	28.0	6.6	10.9	59.7
1974	39.3	25.8	21.6	13.3	41.7
1975	36.8	29.6	24.8	8.8	34.5
1976	29.0	38.1	24.5	8.5	34.8
1977	30.1	48.6	17.5	3.9	26.7
1978	28.2	39.5	20.3	12.0	36.2
1979	26.9	44.5	17.1	11.6	35.9
1980	22.3	37.3	17.9	22.5	44.3
1981	26.6	38.2	21.2	14.1	47.1
1982	25.1	45.6	18.3	10.9	39.3
1983	31.4	39.4	16.6	12.6	45.3

TABLE A-9 **RATIO OF EXPORTS, IMPORTS AND TOTAL TRADE TO GDP**

	EXPORTS	IMPORTS	TOTAL TRADE
1960	15.1	19.2	34.3
1961	14.7	18.9	33.6
1962	13.0	15.6	28.6
1963	13.8	15.1	29.0
1964	14.8	17.5	32.4
1965	17.3	17.7	35.0
1966	16.8	15.2	32.1
1967	17.6	16.2	33.8
1968	15.9	14.5	30.4
1969	17.9	13.5	31.4
1970	16.8	14.3	31.1
1971	18.4	16.2	34.6
1974	31.1	9.3	40.4
1975	22.9	17.3	40.3
1976	24.7	18.8	43.6
1977	23.8	22.1	45.9
1978	18.8	24.2	43.0
1979	27.1	18.7	45.8
1980	32.5	22.3	54.8
1981	24.1	27.6	51.7

SOURCE: FOS, ANNUAL ABSTRACT OF STATISTICS, VARIOUS ISSUES

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